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A Change in G.W.R. Organisation

WE record on page 227 of this issue the appointment of Mr. H. J. Peacock as Assistant Superintendent of the Line of the Great Western Railway with his headquarters, not at Paddington, but at Cardiff. This interesting change in the company's organisation has been made consequent on the war, and the alterations in the flow of South Wales traffic and other developments. It may be recalled that, at a time of congestion after the last war and in preparation for merging a number of local railways into the G.W.R. system, a somewhat similar appointment was made, Mr. C. Roberts being Outdoor Traffic Manager for South Wales. After his death in 1922 the office was discontinued. In our February 14 issue, in discussing the recently-issued bulletin entitled "Organisation of Transport for War," it was pointed out that the railway lines in South Wales were specially designed to facilitate the shipment of a vast tonnage of coal. Owing to the reduction in output due to the loss of our export market, particularly to France and Italy, there has been a large increase in the tonnage of coal conveyed to inland destinations outside Wales. Whereas South Wales shipment coal travels on an average 20 miles from pit to port, the railways now carry much of this coal to inland destinations 150 to 200 miles distant. There are over 100,000 wagons in use in South Wales and consequent on the change in the flow of traffic, the difficulty has been one of distribution and not of shortage of wagons. The company has three divisional Superintendents in the South Wales area, located respectively at Newport, Cardiff, and Swansea. Mr. Peacock's duties as Assistant Superintendent of the Line, will in the present emergency, for the most part, consist in supervising and co-ordinating the traffic operations in and contiguous to the South Wales area. Mr. Peacock brings to this task a wide railway experience and good organising ability which should be invaluable in the task that confronts him.

* * * *

Northern Counties Committee (L.M.S.R.)

During the war increased interest attaches to the accounts and statistical returns of the Northern Counties Committee of the L.M.S.R.; it is the only section of a British railway company which is continuing to issue traffic returns, and the revenue which the L.M.S.R. derives from this line is excluded from the pool established under the financial agreement between the Government and the railway companies and the London Passenger Transport Board.

	1938	1939	1940
	£	£	£
Capital expenditure	3,779,004	3,784,411	3,735,479
Gross receipts from businesses	450,453	480,430	615,198
Revenue expenditure on ditto	462,451	466,963	562,467
Net receipts of ditto	Dr. 11,998	13,467	52,731
Miscellaneous receipts, net	8,513	19,511	22,793
Total net income	Dr. 3,485	32,978	75,524
Interest, rentals, etc	1,241	1,241	1,238
A.R.P. expenditure	—	1,400	2,032
Appropriated for interest on capital	—	30,337	72,255

As will be seen from the table, there was a striking recovery in net receipts. For railway operations they rose by £34,516 to £42,150 and for catering by £4,748 to £10,581. Passenger receipts at £242,866 compared with £179,894 and total passenger train receipts were £305,148 against £246,072. Total goods train receipts amounted to £230,950 compared with £160,969. The percentage of traffic expenditure to receipts was 92·56 against 98·71.

* * * *

Speeding Up Exports

The Board of Trade is anxious that all possible steps should be taken to speed up the shipment of goods for export and to this end it is endeavouring to quicken the turn round of shipping at ports, avoid waste of accommodation in dock sheds, lessen the strain on road and rail transport, and generally ensure a smoother flow of goods through the ports. Exporters who experience difficulty in obtaining rail transport will find that many of their problems can be overcome if they get into touch promptly with the District Goods Officers of the railway companies. Board of Trade repre-

sentatives in the area, under whom in some areas Board of Trade Transport Officers are already working, are also available to assist the smooth flow of traffic and at the same time exporters may receive guidance from their own agents as to the right time for sending goods forward. In some instances where delay has been caused goods have even had to be returned from the docks to the manufacturers by reason of the failure of exporters to comply with wartime export control requirements. Every exporter should ensure that his organisation is fully acquainted with customs requirements, for adherence to the required procedure goes far to expedite shipment.

* * * *

Londonderry & Lough Swilly Railway

The principal business carried on by the company is now road transport and net receipts from this alone showed a credit balance for 1940; at £1,765 they compared with £4,345 for 1939. The debit balance on railway operations was £958 less at £2,340, but the loss on steamboats rose by £56 to £188. The resultant loss of £763 (which compared with a profit of £915) was partly offset by miscellaneous net receipts of £461 or £106 more. After allowing for the debit balance brought forward (£4,912), fixed charges (£4,283), adjustment in respect of statutory charges raised in connection with extension lines no longer required (£2,270) and dividends on county guaranteed stocks (£400) a debit balance of £7,627 is carried forward. Some comparative figures are given below :—

	1938	1939	1940
	£	£	£
Gross receipts from businesses	86,216	90,953	90,453
Expenditure	88,169	90,038	91,216
Net receipts	Dr. 1,953	915	Dr. 763
Miscellaneous receipts (net)	3,633	355	461
Total net income	1,680	1,270	Dr. 302

One 32-seat diesel bus and 15 motor lorries were purchased during the year and two petrol-engines buses were converted and fitted with diesel engines.

* * * *

Railway Nationalisation in Germany

Although various of the remaining private railways in Germany have been taken over by the State since the outbreak of the present war, every acquisition has been accompanied by a formal statement from the German Ministry of Transport intimating that the acquisition does not imply a change in the German transport policy in regard to private railways not worked by the Reichsbahn, and saying that special circumstances attend the particular acquisition in question. Under a Law of September 11, various local railways in Sudetenland territory taken over from Czechoslovakia have also been nationalised, as detailed at page 232 this week. Here again, however, Berlin railway circles stated that the nationalisation of these railways was caused by special circumstances, and did not imply a change in the Reich transport policy. It seems that before the incorporation of Sudetenland into Germany these local railways had been operated by the Czechoslovak State Railways and were in debt. In one case all the shares were the property of the Czechoslovak State. The German Government has therefore made no cash payment to the former owners but has assumed the position of Czechoslovakia as creditor. It is stated that all trade creditors and preference shareholders of the railways in question are being satisfied in full.

* * * *

Steam *versus* Diesel in U.S.A.

The new Hiawatha service of the Chicago, Milwaukee, St. Paul & Pacific RR., announced on p. 218, is of interest from more than one point of view. In the first place, this is an invasion of high-speed territory hitherto monopolised by the diesel streamliners of the Chicago & North Western and Chicago, Burlington & Quincy Companies. The three routes between Chicago and Omaha are respectively 488, 488, and 496 miles long; but whereas the diesel trains, running between Chicago and Denver and beyond, have deposited the Omaha passenger or picked him up at between 1 and 2 o'clock in the morning, the Milwaukee has stolen a march on its competitors by completing the journey of the new Mid-West Hiawatha at 8.45 p.m. at Omaha on its westbound journey, and 10 min. earlier at Chicago coming east, while the running time of 8 hr. is only 15 min. more than the average Chicago—Omaha journey of the diesel trains. In the second place the new Milwaukee flyers begin a further contest between steam and diesel power, as the Milwaukee is remaining firm in its allegiance to steam, the possibilities of which have been so strikingly demonstrated with the existing Hiawatha trains between Chicago and the Twin Cities—a further proof of the steam locomotive's vitality. The Burlington has responded by accelerating the westbound Exposition Flyer by 2¼ hr. to Omaha, so that it parallels the Milwaukee flyer by leaving Chicago at 12.35 p.m., and reaching Omaha at 8.35 p.m.; the Ak-Sar-Ben has been similarly accelerated to an 8 hr. run in the reverse direction, and both have been turned over to diesel haulage, for which preparations had been in hand for some time.

* * * *

Transport after the War

Students of transport may be recommended the Keith Lecture by Mr. George Mills, Divisional General Manager of the London & North Eastern Railway, which was delivered to the Royal Scottish Society of Arts on February 15 and to which reference was made in these columns last week. Mr. Mills succeeded admirably in compressing many of the main features of the railway position into a concise and interesting lecture. He also dealt at some length with the future and to what extent and in what nature transport in the years to come will be conditioned by Government policy. The various courses which he outlined, which ranged from the restoration of the *status quo*, leaving all forms of transport in the position obtaining in August, 1939, to a complete nationalisation of road and rail transport, were obviously conjectural and must remain so. Interesting though speculation may be, it is obvious that much depends on the duration and course of the war. At this stage, presuming that the conflict is prolonged, it is patently impossible to foresee what economic changes may be wrought in the country by the time peace is restored or what adjustments may be made necessary in the transport system to cater for the needs of the public, industry, and commerce after they have suffered this adjustment.

* * * *

Through Traffic between Finland and Russia

A situation fraught with obvious difficulties, and some that are not so obvious, to those not immediately connected with railway operation, is the resumption of through traffic between two countries after the conclusion of hostilities. Within recent years Finland and the U.S.S.R. provided an outstanding example of such hostilities and the subsequent resumption of commercial traffic after the cession of Finnish territory to Russia. Fighting ceased in March of last year, and we now learn through an American Legation report from Helsinki that an agreement was signed in Moscow on September 6 providing for direct passenger and freight traffic between the U.S.S.R. and Finland; transit traffic between the U.S.S.R. and Sweden *via* Finland; and rail communication between the U.S.S.R. and its leased naval base at Hango. The agreement provided that it should become effective not later than December 6, but it was expected to come into force considerably before that date; freight traffic between Helsinki and Leningrad is said to have been begun on September 24 last and passenger traffic on the same route on October 23. One obstacle to interchange between two countries is a provision of the agreement requiring the reloading of all goods wagons at the frontier, apart from a very few exceptional cases. The Finnish frontier stations are named as Parikkala and Vainikkala (Vanviala), and the Soviet frontier stations as Syvaaro and Nurmi. It is understood that through passenger tickets may now be purchased to Helsinki and Åbo (Turku) for Viipuri (Viborg), Leningrad, and Moscow. Freight and passenger fares must be paid in Finland as far as the frontier according to the Finnish tariff, and thence according to the Russian tariff, and *vice versa*.

Railway Earnings in 1940

THE net revenues returned by the four main-line railway companies and the London Passenger Transport Board, which were the subject of brief comment in our columns last week, were broadly in accord with the expectations which had been entertained. That is to say, at £42,763,000 the net revenue of the pool was between the minimum guaranteed by the Government—£39,850,000—and Stage II at which the Treasury shares equally with the lines—£43,500,000. The five major partners in the pool drew £42,297,000 from it, so that it would appear that £484,000 is the share remaining for the minor railways and worked lines. The fact that the revenue in the pool exceeded the guaranteed minimum by some £2,913,000 might at first sight appear more satisfactory than a closer study of the constituent figures justifies. In the first six months of 1940 there was an advance in gross receipts of the pool by £20,687,000 and for the full twelve months the figure is £41,707,000; but whereas, in the first half of the year, of total gross receipts of £116,458,000 no less than £21,554,000, or rather more than 18·5 per cent. was retained as net receipts, in the second half, of the £131,534,000 of gross receipts the amount of net receipts was £108,576,000 or just under 17·5 per cent. It is apparent therefore that in the more recent six months costs rose more rapidly than income. It is not possible to estimate on the information at present available what bearing on the expenditure for the second half of the year provision for war damage has had, but whatever it may prove to have been, it was specifically allowed in the financial agreement as a charge on the pool.

The announcement of the increased revenues, relatively small though they are in relation to the vastly greater amount of work which the railways are being called on to perform in the national effort, has been seized upon by many in an endeavour to further their arguments against the clause in the financial agreement linking costs with charges. *The Daily Herald* characterised the increase of £2,913,000 in the pool as compared with the guaranteed net revenue as a "£3,000,000 gift to the railways," presumably taking the viewpoint that earnings should be pegged at the minimum and that increased work should not attract additional reward. That paper has been conducting a daily campaign in favour of a revision of the financial agreement. *The Daily Mail* pointed to a rise in the price of L.N.E.R. second preference stock from 11 to 15 on the news of the increased dividend, and declared that this "made holders £2,500,000 better off." Apparently there is no daily paper news value in the heavy falls which these stocks have suffered from time to time, but a "leading stockbroker" is quoted as expressing the view that he could not "understand how the railway directors will have the face to ask for increased fares when they are making money at the present rate." If these words were correctly reported they showed that among some of the matters that were not understood was the financial agreement *The Star* takes the view that the announcement that the net revenue is more than that guaranteed by the Government "will create a widely-diffused annoyance, in view of the clamour for increased fares." It criticises the directorate and fears that the public may visit on the lower grades of railway servants "some of the irritation engendered by the decision of a group of venerable directors gathered in a Louis Quinze board room."

No official indication has been given that the Railway Executive Committee has, in accordance with the terms of the agreement, lodged an application for a further advance in railway charges to offset the rise in costs which has obviously taken place. In point of fact the adjustment of charges is now some six months overdue and no explanation has been given of the delay which has occurred. That might reasonably be a ground for complaint by railway stockholders. There is little doubt, however, that the activity of sections of the press in criticising the recent earnings statements justifies once again the forebodings expressed in THE RAILWAY GAZETTE when the agreement was first published. That the railway chairmen were fully alive to the disadvantages inherent in the arrangement was made clear at the annual meeting a year ago. In view of the changes which have occurred in the level of costs and charges in the intervening months and the attitude of the public and the House of Commons to the financial agreement—the Minister of Transport himself has expressed his dislike for it—the speeches of the chairmen at the forthcoming meetings will be subjected to special attention for anything that may be said on this subject.

* * * *

Great Western Railway Company

THE full report and accounts of the Great Western Railway Company for the year 1940 again are issued in the modified form adopted with the approval of the Minister of Transport a year ago for the 1939 financial details. The report sheds some light on the point raised in our columns last week, when the preliminary figures were published, as to the basis on which provision for war damage had been made by the controlled undertakings. It points out that the financial arrangements made with the Minister of Transport by the controlled railways and the London Passenger Transport Board have been the subject of further discussion as to detail and are now embodied in a draft agreement. One of the main parts of this draft agreement is affected by the contributory insurance scheme in the War Damage Bill and the agreement cannot be completed until the scheme is settled. If the War Damage Bill becomes law, it will entail negotiations between the Minister, the main-line companies, and the London Passenger Transport Board, for some revision of the agreement as from January 1, 1941, and it is expected that these will ensue shortly. In agreement with the Government, the present financial accounts have been closed on the basis of the draft agreement which provides in this respect that the cost of war damage, within a limit of £10,000,000 in any year, chargeable to the pool account shall be spread equally over 13 four-weekly periods, beginning with the four-weekly period in which the damage was suffered. The pool account for the year 1940 has been charged accordingly.

The net revenue for the year shows an advance of £186,663 at £6,793,987, and with the balance brought forward (£202,099) there is available £301,677 more at £6,996,086. Interest on loans and debentures absorbs £5,346,232 and dividends on rent charge, guaranteed, and preference stocks take £3,339,914. The balance available for ordinary stockholders is therefore £2,006,318. The interim dividend of 1½ per cent. for the half-year ended June 30, 1940, absorbed £643,946 and the balance of £1,362,372 admits of a payment of 2½ per cent. for the half-year ended December 31, 1940, making 4 per cent. for the year. The balance carried forward is £289,129. For 1939 the dividend was 3½ per cent. Dividends on the ordinary stock for the past ten years have been as follow:—

1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
%	%	%	%	%	%	%	%	%	%
3	3	3	3	3	3	4	½	3½	4

Results for the past three years are summarised in the following table:—

	1938	1939	1940
	£	£	£
Total expenditure on capital account	186,363,713	187,377,822	188,087,111
Joint lines—company's proportion of net revenue	144,318	147,083	142,273
Miscellaneous receipts (net)	1,085,543	*271,235	*272,799
Net revenue	5,043,753	6,607,324	6,793,987
Interest on loans and debentures ...	1,649,848	1,649,855	1,649,854
Dividends on rent charge, guaranteed, and preference stocks	3,343,749	3,339,914	3,339,914
Balance after payment of preference dividends	50,156	1,617,555	1,804,219
Dividend on ordinary stock	214,649	1,502,541	1,717,189
Rate per cent.	¼	3½	4
Surplus or deficit (+ or −)	− 164,493	+ 115,014	+ 87,030
Appropriation from contingency fund	100,000	—	—
Balance brought forward from previous year	151,578	87,085	202,099
Balance carried forward to subsequent year	87,085	202,099	289,129

* Other than those included in financial arrangements with Government.

Details of revenue receipts and expenditure of the whole undertaking are considerably curtailed by reason of a number of the items being included in the financial arrangements with the Government. It is shown that the company's pro-

portion of net revenue of jointly owned and leased lines is £142,273, which compares with £147,083 and that its revenue from interest and dividends from investments in road transport undertakings, together with the Penarth Pontoon, Slipway & Ship Repairing Co. Ltd. is £272,799, an increase of £1,564. The directors report that, although most of the major schemes for the improvement of the company's undertaking authorised before the war have been suspended, many new works are being carried out throughout the system at the request of the Government to meet war traffic requirements.

* * * *

London Midland & Scottish Railway Company

FROM the report and accounts of the London Midland & Scottish Railway Company for the year 1940 it is clear that the dividend of 1½ per cent. on the ordinary stock was earned with a margin of £65,010. For the previous year, when the same dividend was paid it was necessary to draw on the carry forward to the extent of £30,070. Dividends on the ordinary stock for the past ten years follow:—

1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
%	%	%	%	%	%	%	%	%	%
¼	nil	nil	nil	nil	1½	1½	nil	1½	1½

The report states that the Government has not yet announced its proposals for the insurance of war damage so far as public utility undertakers, including railway companies, are concerned, but the companies have been notified that in the Government's view a modification of the existing financial agreement for 1941 and future years will be necessary. The agreement now in force provides for the total sum chargeable to the pool account for war damage to be spread evenly over the twelve months from the date it is suffered, and the accounts for 1940 have been prepared accordingly. The net revenue for the year was £14,706,700, an increase of £395,180, and after setting aside £300,000 for wartime contingencies, and meeting interest on debenture stocks, the balance available for dividend, including £101,025 brought forward, was £10,068,555. After full payments have been made on the guaranteed, and preference stocks and of 1½ per cent. on the ordinary stock, £166,135 is carried forward. Results for the past three years are given below:—

	1938	1939	1940
	£	£	£
Total expenditure on capital account	459,285,651	460,462,477	461,161,709
Joint lines—Company's proportion of net revenue	290,555	189,960	112,725
Miscellaneous receipts (net)	2,118,272	*534,927	*503,081
Net revenue	11,345,520	14,311,520	14,706,700
Interest on debenture stocks	4,439,170	4,439,170	4,439,170
Dividends on guaranteed and preference stocks	6,869,024	8,474,383	8,474,383
Balance after payment of preference dividends	37,326	1,397,967	1,493,047
Dividend on ordinary stock	—	1,428,037	1,428,037
Rate per cent.	Nil	1½	1½
Surplus or deficit (+ or −)	+ 37,326	−30,070	+ 65,010
Balance brought forward from previous year...	93,769	131,095	101,025
Balance carried forward to subsequent year ...	131,095	101,025	166,135

* Other than those included in financial arrangements with Government

The miscellaneous receipts shown above include £432,618 dividends from associated bus companies, compared with £409,708 in 1939. They also include the following profits from goods road undertakings, namely, £5,475 (against £14,963) from Carter Paterson & Co. Ltd., £7,319 (against £1,000) from Joseph Nall & Co. Ltd., £22,280 (against £24,748) from Hay's Wharf Cartage Co. Ltd., and £7,150 (against £2,068) from Wordie & Co. Ltd. David MacBrayne Limited brought in £3,909, against £9,000 in the previous year. The Northern Counties Railway (Ireland) yielded £72,255 compared with £30,337 in 1939.

In the balance sheet cash at bankers and in hand is shown at £10,610,123 compared with £6,837,499 and investments in Government securities at £22,284,911 against £21,892,626. Investments in stocks and shares held by the company, and advances to other companies, not charged as capital expenditure, totalled £7,359,833 against £7,742,349. Stocks of stores and materials stand at £9,499,757 compared with £8,147,280 and outstanding traffic accounts show an increase from £8,638,588 to £14,045,138. Accounts receivable are given as £3,250,121 compared with £1,646,732. On the liabilities side loan from the Railway Finance Corporation Limited, less investments in securities charged in favour of the corporation, is shown at £7,709,167 against £7,042,500. Accounts payable are £5,109,717 compared with £4,548,784 and liabilities accrued £2,803,204 against £2,281,202. Miscellaneous have risen to £7,106,258 from £1,836,507. Renewal funds total £14,507,212 against £11,099,128; works and equipment maintenance fund is £245,346 compared with £21,096.

* * * *

Great Southern Railways (Eire)

GROSS receipts for the year 1940 showed an increase of £82,940 at £4,568,604 as compared with the previous year; expenditure, however, was higher by £150,491, so that net receipts at £332,950 were £57,551 lower. Net miscellaneous receipts from rents, interests, etc., were £25,906 down by £11,281, giving a total net income of £358,856 which was £68,832 lower. The balance brought forward was £37,060. Debenture interest absorbed £308,595 and interest, rentals, and other fixed charges took £95,022, resulting in a debit balance of £7,701 against a credit balance of £37,060. The debit balance is met by a transfer from compensation under Irish Railways (Settlement of Claims) Act, 1921. The directors have no option but to defer the payment of a dividend on the guaranteed preference stock, and the arrears due for the years 1938 and 1939. As a result of the judgment of the Courts in February, 1940, in favour of the company in the matter of its appeal against the valuation of railway hereditaments, £276,637 in respect of rates overpaid by the company in the three years to March 31, 1940, fell due for repayment by the local authorities. As a result of representations by some of these local authorities that the refund of so large a sum would be a heavy burden on their finances, an arrangement had to be made for spreading the collection by which the company recovered in the year 1940 £173,383 and it was provided that the balance of £103,254, plus interest, should be paid by July 1, 1941. Of this overpayment, £23,662 was attributable to the year 1940, and coupled with £69,238 in respect of the reduced valuation in force from April 1, 1940, gave a reduction of £92,900 for rates in the revenue account.

Total railway receipts in 1940 were £3,437,225, an advance of £87,937 and railway working expenditure was up £105,299 at £3,101,459, giving a fall of £17,362 at £335,766 in net receipts. Total receipts from passengers were £733,728 as compared with £819,912; first class at £45,064 were £502 less and third class at £636,447 were lower by £85,709. Mails brought in £23 more at £162,088 and revenue from parcels, excess luggage, and other merchandise by passenger train less expenses of collection and delivery was £302,313 against £293,400. Total passenger train receipts were £77,248 less at £1,198,129. The proportion of passenger train receipts to total traffic receipts declined from 38·35 per cent. to £35·08 per cent. Among goods traffic merchandise, less collection and delivery expenses yielded £1,552,792, an increase of £113,265. Livestock brought in £312,887 against £301,420, coal, coke and patent fuel £203,462 against £189,813 and other minerals £148,084 against £119,080, giving total goods train receipts of £2,217,226, an advance of £167,386. Among the ancillary businesses, road transport net receipts were but £6,194 compared with £39,673.

	1938	1939	1940
	£	£	£
Total expenditure on capital account ...	31,119,145	31,175,862	31,284,723
Gross receipts from businesses	4,279,788	4,475,664	4,568,604
Revenue expenditure on ditto	3,964,642	4,085,164	4,235,654
Net receipts of ditto	315,146	390,500	332,950
Miscellaneous receipts	35,967	37,187	25,906
Total net income	351,113	427,687	358,856
Interest, rentals and other fixed charges ...	394,124	390,627	403,617
Surplus or deficit (+ or −)	− 43,011	+ 37,060	− 7,701
Proportion of compensation (Settlement of Claims) Act, 1921	6,101	—	7,701
Brought forward	36,910	—	—
Carried forward	—	37,060	—

The ratio of railway traffic expenditure to railway traffic receipts was 90·43 per cent. as compared with 89·66 per cent. in 1939. In operating expenses there was a rise of £118,551 to £884,319 in locomotive running expenses and traffic expenses increased £21,527 to £745,116. The amount charged to rolling stock maintenance was £583,274 against £574,546. Total engine mileage was 11,859,760 compared with 12,027,824.

A Smaller "Green Arrow"

IN spite of the frequent references made in these columns to the advantages associated with locomotives of types and dimensions which permit of their being used under a variety of operating conditions, and for service where engines having heavy axle loads are prohibited, we make no excuse for again drawing the attention of our readers to the subject. The term general utility, as applied to locomotives, is one that may easily be used without strict justification, and the claim to rank a design in that category requires careful investigation. An engine may be lighter in both total weight and maximum axle loading, and its overall proportions may be such as to permit of its going where loading-gauge restrictions prohibit larger locomotives, but its general characteristics must embrace modern features of design and the ability to replace other types which, on account of their proportions and weight, are debarred from being used outside a fairly restricted territory representing, in some cases, only a moderate percentage of the owning company's route mileage. Such a design is that of Sir Nigel Gresley's new 2-6-2 type, a smaller edition of his well-known and highly efficient "Green Arrow" class on the L.N.E.R.

In this new design, Sir Nigel Gresley has succeeded in producing a compact but powerful locomotive on a moderate axle loading and favourable weight-per-foot-run basis, together with modern equipment in all respects. As an example of this, it may be mentioned that the openings at the sides of the cab are fitted with sliding shields of thin steel plate in place of the usual glass windows. The new locomotive, of which an illustrated description appears in this issue, is built on lines which are strictly in accordance with the modern locomotive standards of the company and with a view to its being equally useful as a passenger or freight locomotive. With a maximum axle loading of 17 tons—as compared with the 22 tons of the "Green Arrow"—three 15 in. × 26 in. cylinders, 5 ft. 8 in. diameter coupled wheels and a boiler pressure of 250 lb. per sq. in., the tractive effort reaches, at 85 per cent. of the boiler pressure, the respectable total of 27,420 to which result the contribution of the high steam pressure is largely responsible. Incidentally, these new engines will rank with the "A4" class streamlined Pacifics as the only locomotives on the L.N.E.R. to carry a boiler pressure so high as 250 lb. It is of interest to note that of the two engines so far built, which are classified "V4," one is fitted with a standard copper firebox and the other with a steel box equipped with a single Nicholson thermic syphon, the first application of the device to a locomotive built for service in this country. From the operating point of view what matters is the extent to which the engine can be utilised for working separate classes of trains and how far afield it can go. The total route mileage of the L.N.E.R. is 6,414 miles, but the Pacific and "V2" "Green Arrow" class engines are allowed to run over only 2,752 miles. The new "V4" class engines, with their 17-ton maximum axle load, are permitted to run over an additional 2,248 miles, making a total of 5,000 miles. It has been abundantly proved already that speeds of 70 m.p.h. and more can be run with coupled wheels of moderate diameter, and the dimension chosen in this case, 5 ft. 8 in., will be adequate for speed purposes whilst being a useful size for working heavy trains on slower schedules.

There are points in the design which are of interest in a metallurgical sense, where the selection of materials and dimensions has been given close attention on weight-saving account, and although, with the exception of the application of the thermic syphon to one of the engines, there is nothing that can be called experimental in the design, it will be noted that the equipment details which apply to Sir Nigel Gresley's other locomotives are reproduced in these new ones. The new locomotive is attractive in appearance, a feature which was favourably commented upon when it was exhibited at York on February 19. On that occasion we had the advantage of a talk with Sir Nigel on the footplate of No. 3401, *Bantam Cock*, and, from our own inspection and the first-hand information he gave us, we have no hesitation in describing it as one of the nicest and most useful locomotives he has so far introduced. It is a *multum in parvo* design and, as such, would appear to have been appropriately named.

THE SCRAP HEAP

LONDON AND LIVERPOOL

From a handbill issued in 1820: "The Umpire, a New and Elegant Light Post Coach, to London every afternoon at One O'clock (only four insides) from the Saracen's Head Inn, Dale Street, Liverpool, and arrives at the Saracen's Head Inn, Snow Hill, London, the next evening. Only One Night on the Road."

* * *

PUBLIC RELATIONS

Mr. J. C. Smith, Stationmaster at East Croydon Southern Railway Station, who, for 20 years, has said "Good morning" every day of the week to thousands of London business people, is retiring next Friday. He is one of the best known stationmasters in the London suburbs and has had 46 years' railway service, beginning with the old London, Brighton & South Coast Railway.—*From the "Evening News" of February* 22.

* * *

As indicating the rapid extension of high-speed trains in the United States, it may be noted that as recently as 1930 there were only a few trains booked at 60 m.p.h. or over, and these covered but 1,100 route-miles. By 1936 this number had risen to 644 train runs covering 40,205 route-miles, of which 29,310 route-miles were on a daily schedule basis. By 1940 the number of mile-a-minute and faster runs had increased to 1,200 over 70,140 route-miles, 60,062 on a daily schedule basis.

* * *

THE FIRST TROOP MOVEMENTS BY RAIL

When and where did military authorities first use railways for troop movements? An interesting attempt to answer this question is made by Mr. Edmund E. Pugsley, an employee of the British Columbia Electric Railway, in a recent issue of our U.S.A. contemporary the *Railroad Magazine*. Mr. Pugsley suggests that the first troop movement by rail coincided with the opening of the Liverpool & Manchester Railway on September 15, 1830, when "as a feature of the holiday, the engine hauled a regiment of redcoats 34 miles in two hours."

Developing the theme, it is stated that the first occasion when troops were rushed to an emergency by rail was on June 30, 1831, when about 100 volunteers of the militia were conveyed by Baltimore & Ohio special train on a journey of about 30 miles from Baltimore to quell a strikers' riot at Sykes Mills, Maryland.

The distinction of having conveyed the first troops to go into battle by rail is claimed for Canada's first railroad, the Champlain & St. Lawrence (now part of the Canadian National system), which in 1838 carried three squadrons of carbineers, with artillery loaded on flat trucks, into action against Papineau's rebels in the "Moccasin Rebellion." This is also stated to have been the first occasion that a railway was placed under military guard.

* * *

According to *The Times* of February 9, 1841, a large portion of timber recovered from the *Royal George* at Spithead had recently found its way into Wales, in the shape of sleepers for the Taff Vale Railway. In the article from which this main fact was taken, the *Caernarvon Herald* moralised on the oak that, after forming the "tough ribs of a British man-of-war" and then lying at the bottom of the ocean for 50 years, was now "sustaining the iron road."

* * *

OLDEST U.S.A. RAILWAYMAN DEAD

The death at Catskill, N.Y., on January 2 is announced of Mr. John Leonard Driscoll. Mr. Driscoll, who was 103 years old, began his career as a locomotive fireman on the Hudson River Railroad (now the New York Central) in 1863. After service on other lines, Mr. Driscoll was in 1882 appointed Superintendent of Motive Power & Master Mechanic to the 3-ft. gauge Catskill Mountain Railroad just opened. He retained this position until the abandonment of the line in 1919.

XUM

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

ARGENTINA

United States Sixty-Million-Dollar Loan

It is officially announced that the United States have granted Argentina a loan amounting to U.S.$60,000,000 through the Export-Import Bank, to facilitate trade between the two countries. As the U.S. Treasury Department had previously announced that the sum of U.S.$50,000,000 had been allocated to Argentina for the purpose of stabilising the peso, the total credit facilities obtained by this country amount to U.S.$110,000,000. This sum is roughly equivalent to the amount of the Argentine sterling bonds, the repatriation of which, in liquidation of that country's blocked sterling balances in Great Britain, is at present the subject of Anglo-Argentine negotiations. The U.S. loan is guaranteed by the Argentine Government, and the funds will be made available at the rate of $5,000,000 a month during 1941, for the purpose of settling balances for purchases from the U.S.A. The ordinary bank interest of 3·6 per cent. will be charged, and amortisation is to extend over six years.

Opportunity for American Makers of Railway Equipment

The opinion is expressed in well-informed financial circles that these credit facilities are the first step towards the conclusion of a commercial agreement between Argentina and the United States, under which certain Argentine products such as linseed, wool, and hides would be accorded a special American tariff. It is also pointed out that the extension of the Argentine State Railways and the modernisation of their services are creating heavy demands for all kinds of rolling stock, signalling, and air-conditioning equipment, prompt delivery of which, owing to the war, it is becoming increasingly difficult to obtain from Europe. Attention is also called to the fact that as the purchase of materials for the Argentine State Railways is always made through public tender, this provides American manufacturers of railway equipment with a potentially profitable market.

Harvest Prospects

The first official estimate of the forthcoming harvest, issued by the Argentine Ministry of Agriculture, indicates a heavy increase in all classes of grain, as compared with the previous year. Wheat production is estimated at 8,000,000 tons, which is 4,749,000 tons, or over 146 per cent., above that of 1939-40. If this forecast is confirmed by results, this year's wheat harvest promises to be one of the largest ever recorded in the country's history. The linseed crop is estimated at 2,000,000 tons, an increase of 985,600 tons, or 97 per cent., over the previous year; and oats and barley are higher by 7,400 tons and 8,900 tons, respectively.

The Marketing Problem

Were the existing world conditions normal and European countries in a position to absorb, as heretofore, a substantial proportion of Argentine grain, the prospects of such an abundant harvest would be the cause for widespread satisfaction, and an excellent augury for the country's prosperity generally. Unfortunately, owing to the state of affairs in Europe, the circumstances are quite the reverse, and the Argentine Government, which has already on its hands an unsold maize surplus of over six million tons, will shortly be confronted with the problem of how to dispose of a record wheat and linseed crop, for which there are no prospective markets.

Costly Government Purchase of Wheat and Linseed Crops

The Government has announced its intention of purchasing the current wheat and linseed crops at the price of $6.75 and $9.25 a 100 kg., respectively, an expedient which, it is estimated, will cost the national exchequer about 500,000,000 pesos, of which sum it is estimated that 160,000,000 will be an irrecoverable loss to the Government. When to this figure is added the loss on the purchase of this year's maize crop, amounting to some 90,000,000 pesos, and the debt owing to the National Bank of 130,000,000, incurred in connection with the purchase of the wheat crop, the loss sustained by the Government as the result of these transactions will reach the enormous total of 400,000,000 pesos. Obviously there are well-defined limits to which such a policy of assisting the agricultural community at the expense of the overburdened taxpayers can be carried; a form of State aid granted to no other industry, however depressed. That the Government realises this is shown by the timely warning issued to the growers by the Ministry of Agriculture, intimating that if there is no improvement in the export situation, the Government may find itself unable to grant similar assistance in connection with the April maize crop.

Proposed Expropriation of Shipping

In addition to the existing lack of markets, one of the causes of the decline in the Argentine export trade is the prevailing shortage of shipping. As a solution to this problem, according to a communiqué issued by the Ministry of Agriculture, the Argentine Government is contemplating the expropriation of foreign shipping. The steamers which would be affected by this drastic measure, if carried out, are mainly of German and Italian origin, which have been laid up in the port of Buenos Aires since their respective countries went to war.

UNITED STATES

The South Wind

[As mentioned in these columns last week, where the City of Miami streamline diesel-engined train was described, three services have now been put into operation between Chicago and Miami, each running on every third day, and so between them providing a daily service, but by three different routes, in which ten different railways are concerned. Uniform departure and arrival times are observed in each direction irrespective of route.—ED., *R.G.*] The second of these trains is the Dixie Flagler, owned by the Florida East Coast RR. and worked into and out of Chicago by the Chicago & East Illinois, and the third is the South Wind of the Pennsylvania, which like the Dixie Flagler is hauled by steam, a streamlined coal-burning locomotive of modified "K4" Pacific type being used over Pennsylvania metals.

The South Wind comprises a spacious observation-buffet-lounge car, a dining car, four coaches, and a baggage-dormitory-passenger car, all equipped with tightlock couplers and rubber draft gear of the latest type, and built by the Edward G. Budd Manufacturing Company of Philadelphia. The cars are of shotweld stainless steel, and their exteriors are finished in the standard Pennsylvania Tuscan red and gold. The interiors are decorated in shades of grey, canary yellow, and white, with furnishings of light blue, mulberry, and grey, the decorative scheme being by Raymond Loewy of New York, consultant to the Pennsylvania RR.

Intermediate cities served by the South Wind are Indianapolis, Louisville, Nashville, Birmingham, Montgomery, and Jacksonville. A total of 258 individual reclining and adjustable seats are provided in the South Wind, all of which may be reserved, in addition to 51 comfortable chairs in the lounge. The South Wind uses the Union station in Chicago and the Florida East Coast station in Miami. As previously mentioned, the end-to-end journey of 29½ hr. is the same as that of the City of Miami and the Dixie Flagler.

The New Mid-West Hiawatha

From December 11 last the Chicago, Milwaukee, St. Paul & Pacific RR. added to its Hiawatha fleet of streamline steam-hauled express trains a new Mid-West Hiawatha, covering the 488 miles from Chicago to Omaha in 8 hr., at an overall average of 61 m.p.h. including eight intermediate stops; departure from Chicago is at 12.45 p.m., and arrival at Omaha at 8.45 p.m. At Manilla, Iowa, 65 miles short of Omaha, the train divides, a through section being run to Sioux City, 604 miles from Chicago, reached at 9.40 p.m., and Sioux Falls, South

Dakota, at which the arrival is 11.55 p.m. In the reverse direction the main train leaves Omaha at 12.35 p.m., and reaches Chicago at 8.35 p.m., the connecting Sioux Falls section leaving that city at 9.10 a.m. The streamlined oil-burning Atlantics which originally worked the Twin City Hiawatha are being used, and the train equipment includes Pullman parlour and lounge-observation cars, luxury chair cars with special conveniences for coach passengers, and a taproom-dining car. No high speed service has previously been operated by the Milwaukee Company over this route; but Omaha is on the route of the Denver Zephyr of the Chicago, Burlington & Quincy and the City of Denver and other City services of the Chicago & North Western westwards from Chicago, the Burlington route being 496 miles, and the C. & N.W. 488 miles.

Another Fast Chicago—Omaha Service

From the same date (September 11), the Chicago, Burlington & Quincy RR. has accelerated the westbound Exposition Flyer by 2 hr. 40 min.; it still leaves Chicago at 12.35 p.m., but now reaches Omaha at 8.35 p.m. instead of 10.50 p.m., and Lincoln at 9.55 p.m. instead of 12.35 a.m.—a time of 9 hr. 20 min. instead of 12 hr. for the 551-mile journey. Diesel locomotives are used, but as yet the train is not composed entirely of streamline stock. In the reverse direction the Ak-Sar-Ben is turned over from steam to diesel haulage, and becomes the Ak-Sar-Ben Zephyr; leaving Lincoln at 11 a.m., and Omaha at 12.1 noon, it reaches Chicago at 8.1 p.m., so covering the 551 miles inclusive of stops in 541 min. The reply of the Chicago & North Western is not yet known, but it is significant that the latter company has recently raised the speed limit, over 470 miles of its Omaha main line from Elmhurst, Illinois, to Council Bluffs, Iowa, from 72 to 83 m.p.h. for steam-hauled passenger trains, and from 50 to 63 m.p.h. for freight trains; the limit for diesel streamliners remains at 93 m.p.h.

Bridge Strengthening on the Rock Island Road

Between 1928 and 1931 the Chicago, Rock Island & Pacific Railroad purchased 54 heavy 4-8-4 locomotives of the "5,000" class, but due to the subsequent years of depression, to grade easements, to longer engine-runs and more intensive locomotive working, many of these engines were laid up. In order to extend their use, however, a comprehensive programme of bridge strengthening (described in some detail in the *Railway Age*) is now in hand, covering over 600 bridges spread over some 3,400 route-miles of line. This has made possible much more efficient operation and the scrapping of a number of older engines, as well as the purchase of 72 larger-capacity tenders, thus enabling longer runs between stops for water to be made.

Actually, these engines require a standard of loading known as Cooper's rating E-65, but many bridges are now up to E-72, though on certain lines, where the possibility of future growth of traffic is limited, E-60 and E-45 loadings are still prevalent.

Details of the Work

Practically all the strengthening was done under traffic, the bulk of the truss spans being placed on falsework for this purpose. The usual method employed with plate girder deck spans was to strengthen a second-hand span of the same length and slew it in in place of the weak span, while that was slewed out on the opposite side, falsework being erected on both sides of the original span for the slewing. In many cases the girders were duplicated, or had cover plates and end stiffeners added. Though riveting was generally used, welding of cover plates on to the girders was also carried out under traffic. Webs were strengthened by removing a portion of the shear splices —almost all being originally spliced for shear—and placing strap plates at the tops and bottoms of the webs with sufficient rivets to develop the webs for both moment and shear.

The sole plates or cast-iron shoe bearings of the old spans were replaced by double steel rocker shoes so as to relieve the edges of piers or abutments of concentrated loading when the girders were deflected. Considerable masonry work was also undertaken, and trestles were strengthened by driving additional piles and by adding stringers.

The largest single job was the strengthening of the 1,862-ft. bridge over the Mississippi at Inner Grove, which includes a 442-ft. pin-connected draw span. On the latter, the eye-bar diagonals were strengthened without resort to falsework. Saddles were installed round the pins, similar to U-bolt connections, and additional rods were applied with adjustable yokes, set to bear their share of the stress. The remainder of this span and the other spans were strengthened by rational methods. This bridge was also electrified and signalled, so that 20 train stops daily have been obviated.

SPAIN

Madrid-Burgos Direct Railway

At the meeting of the Council of Ministers on December 14, appropriations of 14,027,327 pesetas and 15,123,338 pesetas respectively were authorised for the construction of further sections of the Madrid—Burgos direct railway. The work is to be carried out by successive contracts of 250,000 pesetas.

The Granada-Sierra Nevada Railway

The whole of the track of the electric railway from Granada to El Charcon, in the Sierra Nevada, 18 km. (11 miles) of metre gauge, is to be relaid. The railway is owned and worked by the State, but the rails are to be supplied by the Andaluces and National Western Companies, presumably from old stocks. The line is mainly of local importance but in normal times carries a fair number of tourists, although this traffic has fallen off since the construction of the new road (said to be the highest in Europe) to a point near the summit of the mountain.

New Rolling Stock

At the same meeting of the Council of Ministers the payment was authorised of 4,804,591 pesetas for new rolling stock contracted by the Railway Material Delegation under the Decrees of March 12, 1938, and May 8, 1939.

SWITZERLAND

Geneva Goods Loop to be Begun

Orders have been issued for an immediate beginning to be made in the construction of a goods loop line from Geneva Cornavin station to La Praille Port; the work involves the construction of one tunnel under the city and two bridges across the Rhone and Arve rivers.

GERMANY

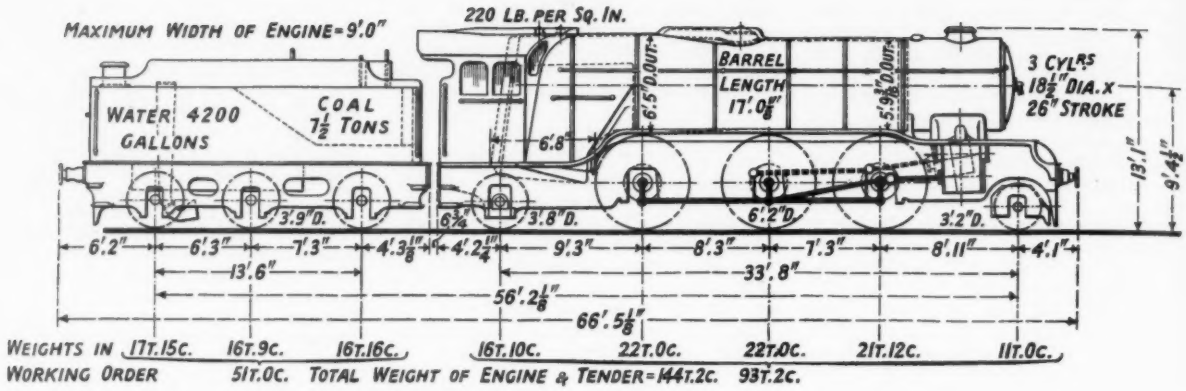
Private Railways : Incorporation in Reichsbahn

The three private railway companies in the State of Mecklenburg were taken over by the German State Railways on January 1, 1941. They are (i) the Mecklenburg Friedrich Wihelm Railway, 114 km. (71 m.), consisting of a main line, 82 km. (51 m.) and two branches of 19 and 13 km. (12 and 8 m.), with a total of 27 stations; (ii) the Prignitzer Railway, 63 km. (40 m.), 12 stations; and (iii) the Wittenberge-Perleberger Railway, 10½ km. (6 m.), 4 stations; all are standard-gauge lines. A few sections of these lines were already operated by the German State Railway Altona division.

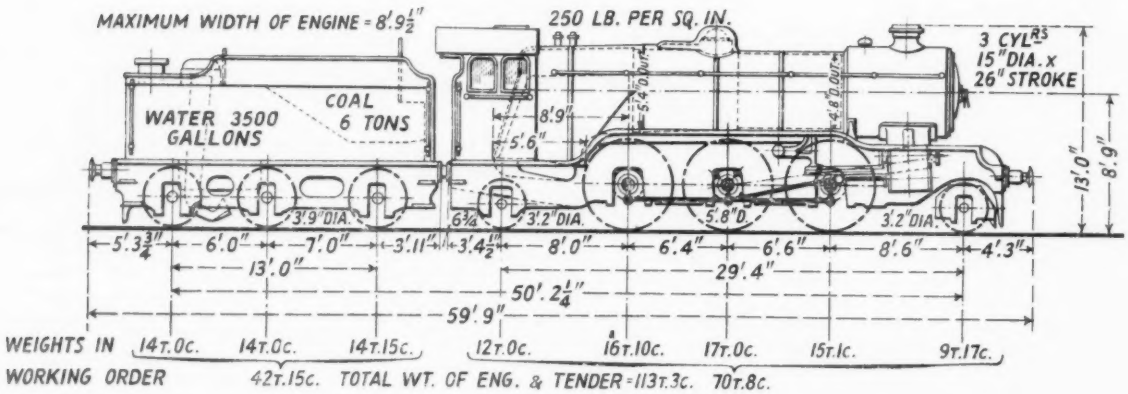
Double Tracking in Czecho-Slovak Territory

Double track has been completed on both main lines in Czech territory which form part of the Prague—Dresden—Berlin route; the German section has been double for a long time. The two main lines are those from Prague Masaryk station to Podmokly (Bodenbach) and from Prague Wilson station to Decin (Tetschen) near the former frontier. The lines join at Stredni Grunt junction (Mittelgrund) where there is a large marshalling yard, before reaching the frontier at Dolni Grunt (Niedergrund). The Podmokly route, 130 km. (81 m.) has always been the more important, the Decin route being slightly longer and harder, 136 km. (85 m.). At the outbreak of the war the former had still one single track section, 31 km. (20 m.) long from Vranany to Hrobce; the latter was single track between Prague and Vsetaty, 40 km. (25 m.) and in two short sections, Litomerice to Velké Zernoseky, 5 km. (3 m.), and Sebuzin to Strekov, 9 km. (5 m.).

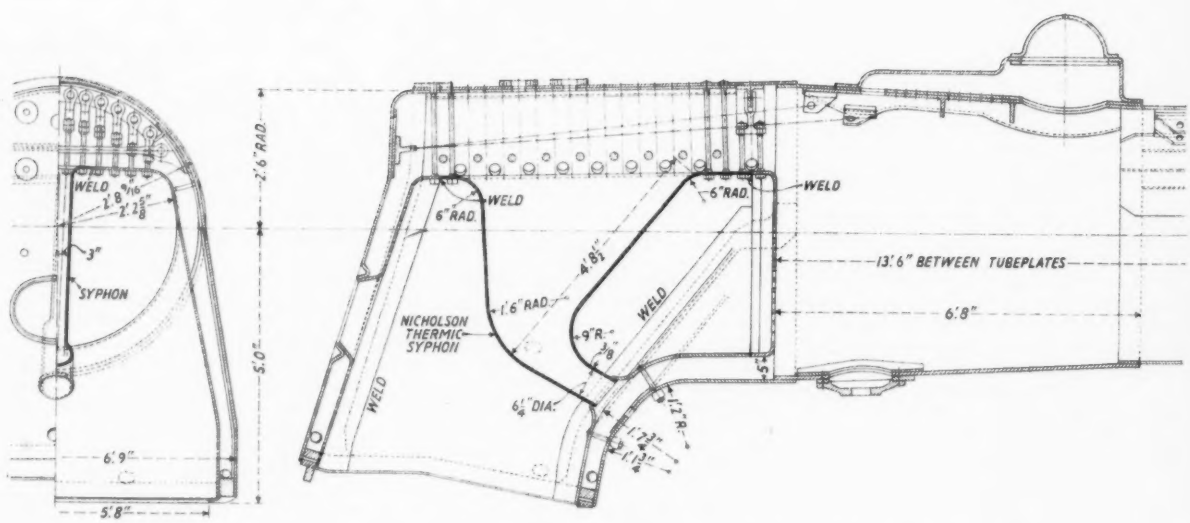
XUM



Overall dimensions and weight distribution of "V 2" locomotive



Overall dimensions and weight distribution of new "V 4" locomotive



Sectional views showing wide type steel firebox fitted with a single Nicholson thermic syphon

NEW GENERAL UTILITY LOCOMOTIVES, L.N.E.R.

NEW GENERAL UTILITY LOCOMOTIVES, L.N.E.R.

A 2-6-2 locomotive which with moderate axle loads and total weight is available for use on 80 per cent. of the company's route mileage

THE demand having arisen for a lighter engine of similar design to the 2-6-2 " Green Arrow " or " V2 " class, but suitable for working over sections of the L.N.E.R. where the 22-tons axle load of those locomotives is prohibited, the construction of two 2-6-2 locomotives, classified as " V4 " was put in hand at Doncaster works, to the designs of Sir Nigel Gresley, the company's Chief Mechanical Engineer. The first engine, No. 3401, *Bantam Cock*, has just been completed and the second will shortly be placed in service.

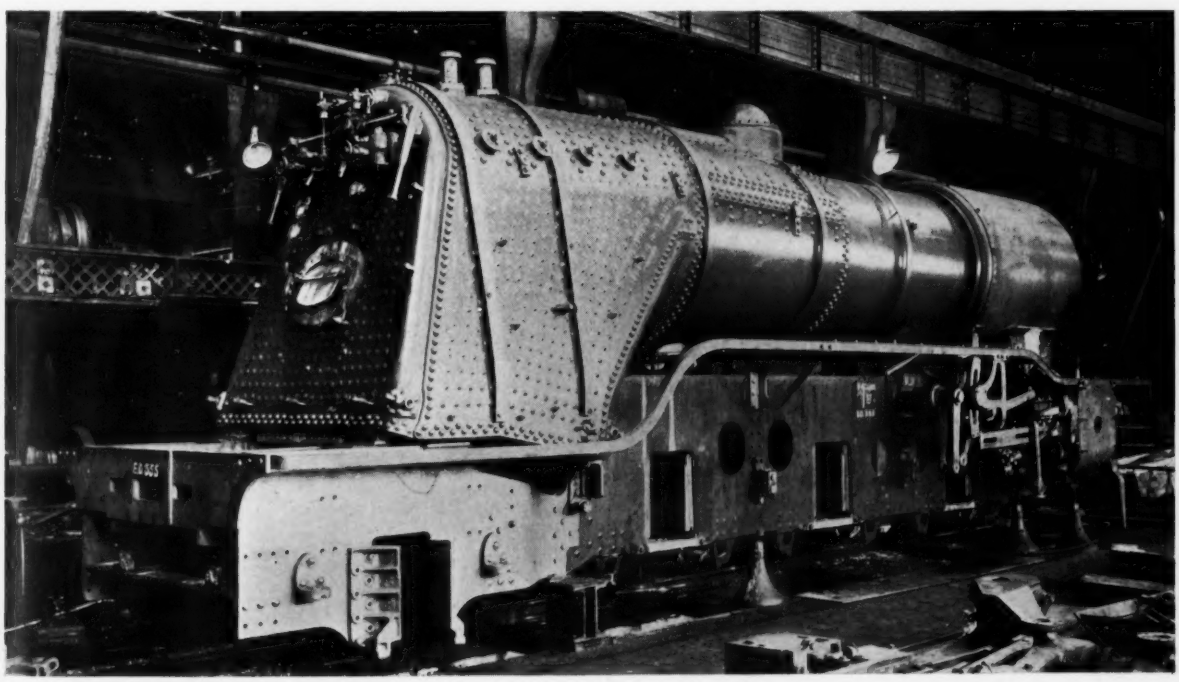
The total route mileage of the L.N.E.R. is 6,414 miles but the Pacific and " V2 " class engines are allowed to run over only 2,752 miles. The new " V4 " locomotives, with their 17-ton maximum axle load, are permitted to run over an additional 2,248 miles, making a total of 5,000 miles. Most of the new L.N.E.R. engines built during the last twenty years have been of large size and power. The " V4 " is, however, of medium power and incorporates such features as high boiler pressure, high superheat, three cylinders, long valve travel and Gresley gear, which have been successfully developed in the larger engines.

In the past the design of locomotives of medium weight and power to run on sections other than main lines has frequently been influenced by the length of existing turntables. The policy of the L.N.E.R. had, for some years, been to replace the older small turntables by larger turntables of modern design and, in consequence, it has been possible to introduce longer engines, embodying the features referred to above, with economical results. In order that the new engine might conform to the limits imposed on secondary lines by the engineers, various methods were adopted to reduce weight, such as the use of 2 per cent. nickel steel for the boiler barrel and the extensive substitution of fabricated construction in place of steel castings for such parts as the dragbox, main frame stays and boiler supports. Weight has also been saved in the lighter construction of the footplate and its supporting angles and brackets. As a result the engine in working order weighs just over 70 tons, compared with the 93 tons of the " V2 " class.

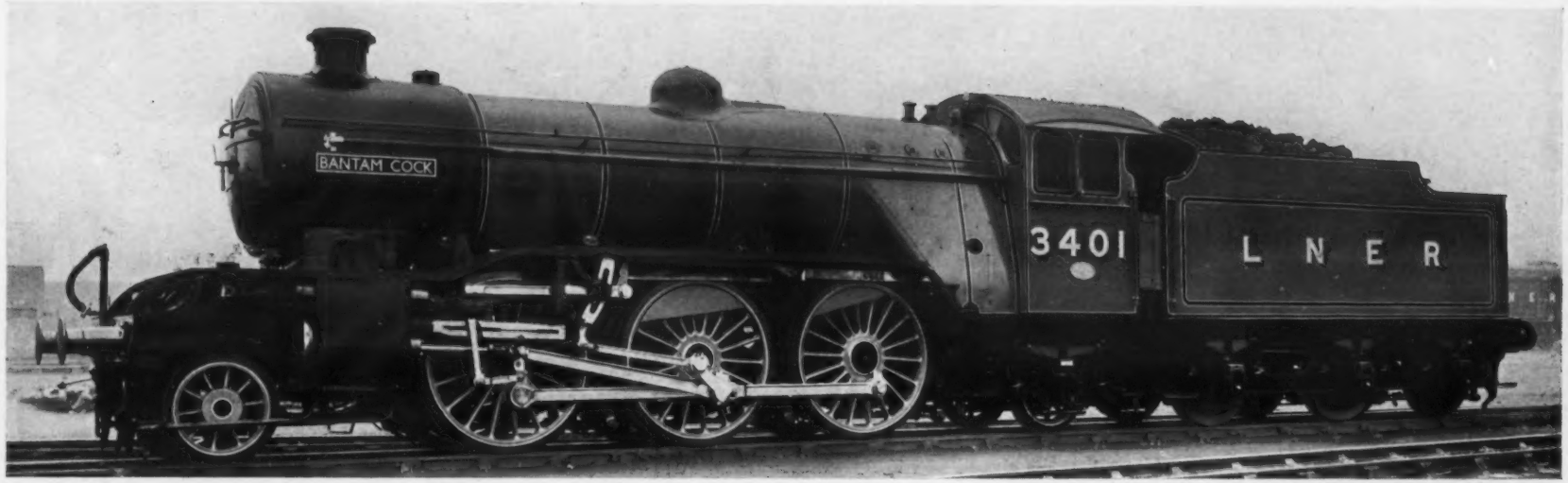
The three cylinders, 15 in. dia. by 26 in. stroke, together with the smokebox saddle, are formed as a monobloc casting, weighing 4½ tons. The piston heads and rods are an integral forging of class C steel and drive the centre pair of 5 ft. 8 in. dia. coupled wheels by nickel-chrome-molybdenum steel connecting rods, 7 ft. long. The coupling rods are of class C steel.

The whole of the revolving and 40 per cent. of the reciprocating masses are balanced. The reciprocating balance of the inside engine is in the driving wheels and the revolving balance in the extended webs of the built-up crank axle. The reciprocating balance of the outside engine is equally distributed between the coupled wheels together with the respective revolving balance. The journals of the coupled wheels are 8¾ in. dia. by 9 in. long ; they are lubricated by means of a Wakefield 6-feed mechanical lubricator and provided with Armstrong oiler pads in removable trays. Piston valves 7 in. in diameter are fitted ; the outside valves are actuated by Walschaerts valve gear ; the suspension of the radius rod is arranged to accommodate the reversing shaft in the limited space available between the leading coupled and driving wheels. The inside valve is operated by the Gresley gear which is now fitted to nearly 700 locomotives on the L.N.E.R.

The leading pony truck is of the standard L.N.E.R. double swing link type, allowing a translation of 4½ in. on either side of the centre line. The trailing carrying wheels are fitted with Cartazzi axleboxes, having slides with an inclination of



Boiler mounted in position on frames



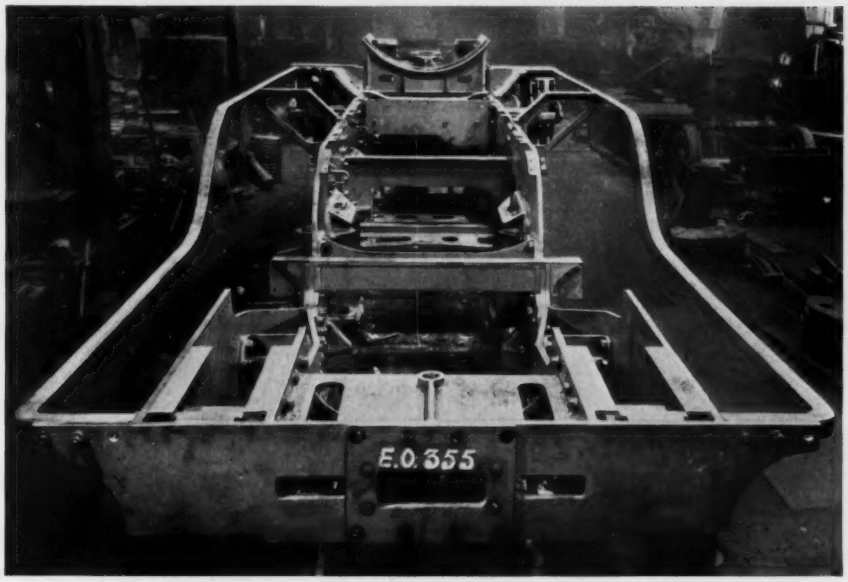
Cylinders (3) dia.			15 in.
,, stroke			26 in.
Piston valves dia.			7 in.
,, ,, max. travel			6 1/16 in.
Steam lap, outside cylinders			1 1/8 in.
,, ,, inside cylinder			1 1/16 in.
Exhaust lap			Nil
Cut-off in full gear			70 per cent.
Wheels : coupled, dia.			5 ft. 8 in
	Dia.	Length	
Axles : journals, pony	6 1/2 in.	9 in.	
,, ,, coupled	8 1/2 in.	9 in.	
,, ,, trailing	5 1/2 in.	10 in.	
Crank pins : outside	5 in.	5 1/2 in.	
,, ,, inside	8 1/2 in.	6 in.	
Coupling pins : leading	4 1/2 in.	3 1/2 in.	
,, ,, driving	6 in.	4 1/2 in.	
,, ,, trailing	4 in.	5 in.	

Springs : Pony (helical) 10 5/16 in long free, 5 1/2 in. outside dia., Timmis section.
Coupled wheels (laminated), 5 in. wide, 1/2 in. thick, 9 plates, 3 ft. 6 in. centres.
Trailing wheels (laminated), 5 in. wide, 7/16 in. thick, 9 plates, 4 ft. 0 in. centres.

Brakes : Vacuum.		
Boiler : Outside length of firebox overall		9 ft. 1 1/8 in.
,, ,, ,, ,,		5 ft. 6 in.
,, width ,, ,,		6 ft. 9 in.
Maximum dia. of barrel		5 ft. 4 in.
Thickness of barrel plates		11/32 in. and 1/2 in.
Thickness of wrapper plates		5/16 in.
Firebox : Height of crown above foundation ring	front	5 ft. 9 in.
	back	4 ft. 11 15/16 in.
Interior length at top		6 ft. 6 3/4 in.
,, width at boiler centre		4 ft. 4 1/8 in.
Thickness of copper plate—		
Sides and back		5/16 in.
Tubeplate		5/16 in. and 1 1/2 in.
Grate : Length on slope		4 ft. 9 5/16 in.
Width		5 ft. 11 1/2 in.
Firegrate area		28·5 sq. ft.
Boiler pressure, per sq. in.		250 lb.
Tractive effort (at 85 per cent. boiler pressure)		27,420 lb.
Total adhesion weight		48 tons 11 cwt.
Factor of adhesion		3·96

Tubes : small : material		Steel.
number		143
dia. outside		1 3/4 in.
thickness		11 I.W.G.
Tubes : superheater flue : number		22
dia. outside		5 1/4 in.
thickness		5/32 in.
length between tubeplates		13 ft. 6 in.
Heating surface : Firebox		151·6 sq. ft.
Tubes		884·3 sq. ft.
Flues		408·2 sq. ft.
Total evaporative heating surface		1,444·1 sq. ft.
Superheater : number of elements		22
dia. inside		1·244 in.
heating surface		355·8 sq. ft.
Total heating surface		1,799·9 sq. ft.
Weight of engine, in working order		70 tons 8 cwt.
Water capacity of tender		3,500 gals.
Coal ,, ,,		6 tons
Weight of engine and tender in working order		113 tons 3 cwt.

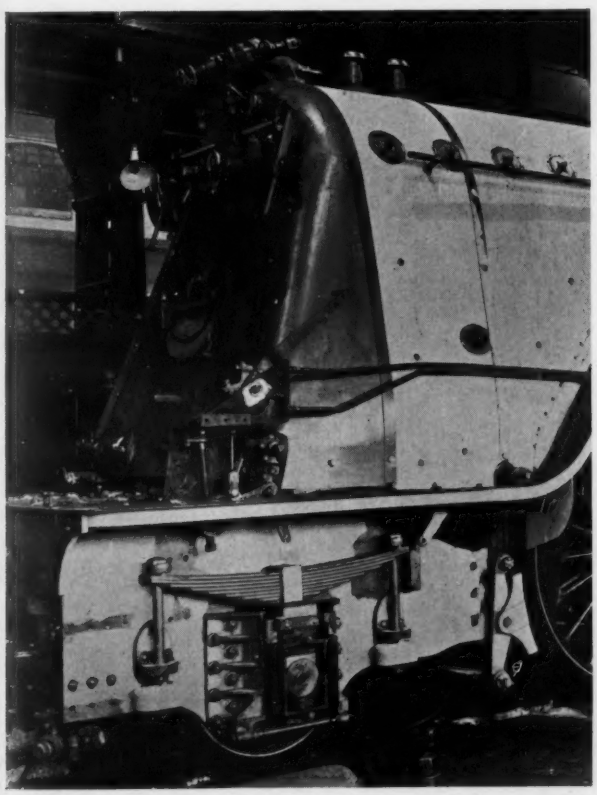
New 2-6-2 type "V 4" class locomotive, L.N.E.R.



Frames from back end showing welded plate construction

1 in 10. These arrangements together with the short rigid wheelbase permit the engine to negotiate a 4-chain curve.

The boiler is of the same general design as, but of smaller proportions than, that fitted to the Pacific and "V2" class engines. The maximum diameter of the barrel is 5 ft. 4 in., tapering to 4 ft. 8 in. dia. at the parallel front end course.



Footplate end showing trailing wheel fitted with Cartazzi axlebox

The tapered course of the barrel is fitted with a steam collector immediately behind the dome, and steam passes to the slide-valve type regulator through a series of transverse slots ½-in. wide in the barrel plate. The superheater header is of the Superheater Company's AX type, with isolated saturated and superheated compartments and ball joint type elements. The working pressure of the boiler is 250 lb. per sq. in., at 85 per cent. of which the tractive effort of the engine is 27,420 lb.

The first locomotive is fitted with a copper firebox and copper stays and the second has a steel firebox of completely welded construction except for the rivets passing through the foundation ring. This firebox is fitted with a Nicholson thermic syphon. Although this device has been used extensively on the Continent and in America, no engines have hitherto been so fitted on British railways. The two engines will afford a valuable means of carrying out comparative tests of the efficiency, maintenance cost and general reliability of steel and copper fireboxes of the wide type.

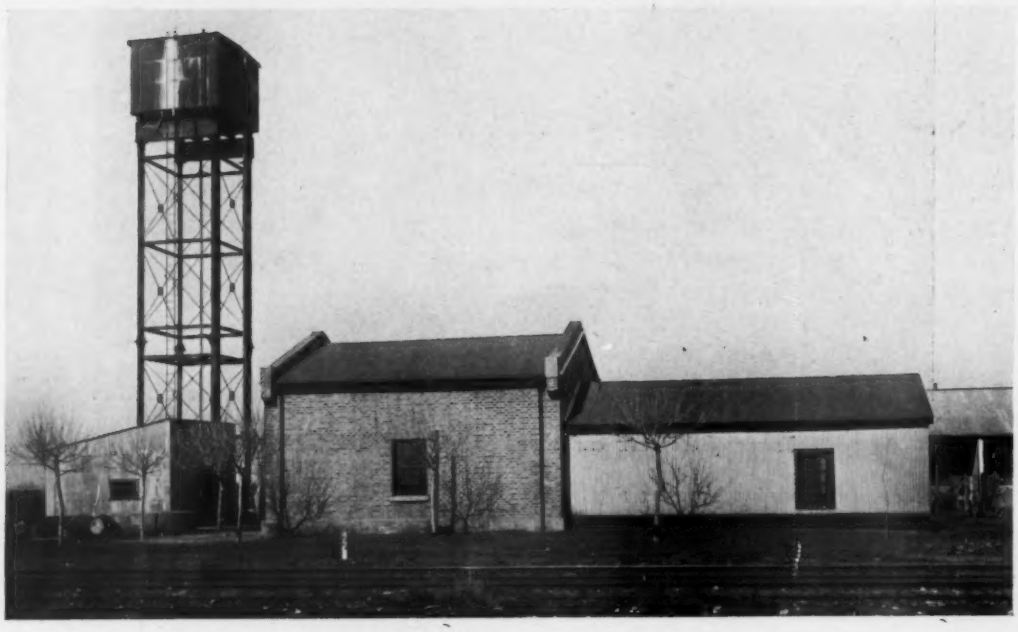
In connection with the fitting of the Nicholson thermic syphon, it is interesting to note that a longitudinal midfeather was fitted to copper fireboxes of engines designed by Mr. J. J. Cudworth on the South Eastern Railway as far back as 1857. As the midfeather extended to the firebox backplate, two fireholes were necessary, but the principle involved was the same as that of its modern counterpart. A transverse midfeather across the centre of the firebox was fitted on thirty 0-6-0 locomotives built by E. B. Wilson & Company for the Great Northern Railway, to Mr. Sturrock's design, as early as 1851. In 1860, twelve 2-2-2 type engines were built by Kitson, Sharp Stewart, and Robert Stephenson, to Mr. Sturrock's design, having longitudinal midfeathers similar to those used by Mr. Cudworth on the South Eastern Railway.

The "V4" engine is fitted with vacuum brake, having 21-in. dia. cylinders operating blocks on the trailing side of each coupled wheel. The tender is of special light construction, the tank being completely welded, and the dragboxes and frame stays are also fabricated by welding. The main particulars of the engine and tender are tabulated on the opposite page.

The designs for the "V4" locomotives were prepared before the outbreak of war and the engines would have been in service last summer if the materials had then been forthcoming. The first to be completed was exhibited, together with a new electric locomotive for the Sheffield-Manchester service (G.C. section) at the old station of the L.N.E.R. at York on Wednesday, February 19. Photographs taken at this visit of inspection are reproduced at page 225.

MAINTENANCE OF WATER SUPPLY EQUIPMENT

Improved methods on an Argentine railway produce important savings



Typical pumping plant and water tower on an Argentine railway

SOME years ago one of the British-owned railways in Argentina made a careful study of the whole of its locomotive water system, and the result of this survey proved conclusively that considerable economy could be obtained by the introduction of small internal-combustion engines to replace the whole of the horse-driven and steam-driven plants at main and subsidiary points. Replacement was begun in the oldest and smallest plants, but eventually all the steam pumping plants gave way to the more modern type. As water service failures had been heavy, it was decided to reform the maintenance methods at the same time, and the preventive maintenance system was introduced.

The preventive maintenance system introduced was what may be termed the stitch-in-time policy and therefore, instead of waiting for advice from the various pumping stations that the plant was giving trouble or had stopped functioning, it was arranged that the mechanic and his assistant in charge of each section should periodically examine each pumping plant at least once every fifteen days. As these men had previously been accustomed to carry out their various journeys from plant to plant on goods trains, it was found that they could not cope with the new requirements unless they had better facilities for travelling. They were, therefore, provided with light trolleys capable of carrying two men and the necessary tool-box equipment. These trolleys can be removed from the track by one man in a few seconds, consequently their transit is in no way handicapped by their having to observe the block train system adopted on the railway concerned. The introduction of these trolleys enables each man to attend to a larger number of plants than previously, and the sections for which each two men are responsible are considerably extended.

In 1928, with a total train-mileage of 9,697,865, the cost of locomotive water per 1,000 train-miles was £6·02, and the failures in water service numbered 265. In 1937, when train-mileage was 9,416,558, there was not a single failure, and the cost was £3·96. In these costs are included wages and materials for repairs and maintenance, wages and subsidies for pumping, cost of fuel or fuel-oil, water purification, and all incidental expenses concerned in the provision of water

Internal-combustion engine and pump

Mechanic and mate with tool box on light trolley

for locomotive purposes. No allowances are included for writing off obsolete plant or contributions to the renewal fund.

Water Service Statistics, 1921 to 1937

Year	Total train mileage	Locomotive water consumption cost per 1,000 miles £ (Sterling)	Number of failures in water service
1921	8,770,272	8·70	No records available
1922	8,593,799	8·05	" " "
1923	9,106,921	7·04	" " "
1924	9,525,420	6·86	" " "
1925	8,794,840	6·80	" " "
1926	9,000,518	6·37	" " "
1927	9,180,710	6·53	" " "
1928	9,697,865	6·02	265
1929	10,041,917	5·95	159
1930	9,532,950	5·92	39
1931	8,459,420	5·90	24
1932	7,742,973	5·78	10
1933	7,554,901	4·73	5
1934	7,663,184	4·56	0
1935	7,919,014	4·23	0
1936	8,583,975	3·91	2
1937	9,416,558	3·96	0

New L.N.E.R. electric and steam locomotives after inspection at York

New steam and electric locomotives for the L.N.E.R. were inspected at York on February 19 by the Chairman, and directors and chief officers of the company. The steam locomotive is described at page 221.

For service on the Sheffield—Manchester line of the L.N.E.R., the electrification of which on the 1,500-volt d.c. system has been suspended for the time being because of the war, 70 mixed traffic locomotives were authorised, and the first has been completed at Doncaster. The electric traction equipment has been provided and installed by the Metropolitan-Vickers Electrical Co. Ltd. The locomotive is designed to handle passenger and goods trains of 1,000 tons maximum weight on the 1 in 100 grades over the Pennines at speeds up to 65 m.p.h. It has four traction motors giving a total of 1,868 h.p. at one hour rating, or 1,360 h.p. continuously. Regenerative braking and an electric boiler for steam heating are incorporated. A full description will appear in our Electric Traction Section next week.

Photo, courtesy] [*Northern Echo*

Group taken during the inspection of the new L.N.E.R. "V4" engine at York on Wednesday, February 19

Left to right: Mr. Walter K. Whigham, Director; Sir Ronald Matthews, Chairman; Mr. C. H. Newton, Chief General Manager; Sir H. Nigel Gresley, Chief Mechanical Engineer; Sir William Gray, Director

British Railways and the War—59

Above: A team on the Southern Railway, trained to fight railway fires and to travel to the scene of a fire in a specially-equipped train with the capacity of 15,000 *gal. of water, at a recent practice. This train was fitted up originally for weed-killing and as such was described in our issue of July* 23, 1937, *page* 152. *It comprises six old locomotive tenders to carry water, and a van for accommodating the staff and equipment*

Above and right: Two views taken on February 17 *when Mr. William Mabane, M.P., Parliamentary Secretary to the Ministry of Home Security, inspected at Paddington station one of the three fire-fighting trains placed in service on the Great Western Railway. Brief reference to these trains was made last week and further details are included at page* 230 *of the present issue. The view above shows Mr. Mabane with Sir James Milne (General Manager, G.W.R.) and Mr. K. W. C. Grand (Principal Assistant to the General Manager, G.W.R.) watching a pump trailer being unloaded. The view on the right shows an auxiliary fire pump attached to a covered truck included in the composition of the train*

RAILWAY NEWS SECTION

PERSONAL

G.W.R. Appointments

The Great Western Railway announces that Mr. H. J. Peacock, Divisional Superintendent, Cardiff, is appointed Assistant Superintendent of the Line, located at Cardiff. He is succeeded as Divisional Superintendent by Mr. H. H. Phillips, Assistant Divisional Superintendent, Cardiff. The appointment of a headquarters' Traffic Department Officer at Cardiff is designed to co-ordinate more effectively the existing South Wales organisation, so far as railway operating problems are concerned.

Mr. Brian H. Colquhoun has been released by Sir Alexander Gibb & Partners to become Director-General of Aircraft Production Factories in the Ministry of Aircraft Production. Mr. Colquhoun will control the building and equipment of the Ministry's factories as distinct from those run privately. He succeeds Mr. Allan S. Quartermaine who has been recalled to the Great Western Railway, as recorded in our February 7 issue. Mr. Colquhoun, who is 38 years of age, has controlled during his career nearly £40,000,000 worth of civil engineering works. He was formerly in charge of the design and construction of the £7,000,000 Mersey tunnel for the Engineer, the late Sir Basil Mott. Subsequently he was in charge of the Chorley Royal Ordnance Factory. Just before the war he was appointed to take charge of the design and construction of the new Blackwall tunnel; this work, however, was abandoned owing to the war. When war broke out Mr. Colquhoun joined Sir Alexander Gibb & Partners as Engineer-in-Chief for two new Royal Ordnance factories. A record was created in speed of construction.

The Distinguished Flying Cross has been awarded to Squadron-Leader H. G. Lee, formerly in the Accountancy Branch at the headquarters offices of the Victorian Government Railways in Melbourne. He is the son of Mr. W. T. Lee of the old Telegraph Branch in the same offices. The decoration was awarded for conspicuous valour and zeal in the R.A.F.

Mr. W. P. Spens has been co-opted a Director of the Southern Railway in place of Colonel Henry M. Mansbridge, whose death we recorded in our December 20 issue.

Mr. H. J. Peacock, Divisional Superintendent, Cardiff, Great Western Railway, has been appointed Assistant Superintendent of the Line, with headquarters at Cardiff. This interesting change in the organisation of the company has been made consequent on the war, and the alteration in the flow of South Wales coal traffic, and other developments, and the importance of South Wales ports for dealing with import traffic. The company has three Divisional Superintendents in the South Wales area, located respectively at Newport, Cardiff, and Swansea. Mr. Peacock's duties as Assistant Superintendent of the Line, will in the present emergency, for the most part, consist in supervising and co-ordinating the traffic operations in and contiguous to the South Wales area. Mr. Peacock brings to this task a wide railway experience and good organising ability which should be invaluable in the task that confronts him. He joined the service of the G.W.R. in 1898 in the Divisional Locomotive & Carriage Superintendent's Office at Bristol. After working for a few months there he was transferred to the Traffic Department at Stapelton Road, Bristol, where he gained experience in passenger and parcels work. He joined the staff of the Bristol Divisional Superintendent in 1899, where he remained until his transfer to the Office of the Superintendent of the Line at Paddington in January, 1915. At Paddington Mr. Peacock was associated with freight train operating and in 1923 he became chief of that section of the Superintendent of the Line's Department. In May, 1929, he returned to Bristol as Assistant Divisional Superintendent, and in July, 1933, was appointed Divisional Superintendent at Worcester. In October, 1937, he was appointed Operating Assistant, Superintendent of the Line's Office, Paddington, and on January 1, 1938, Divisional Superintendent, Cardiff.

Mr. H. J. Peacock

Appointed Assistant Superintendent of the Line, Great Western Railway, with headquarters at Cardiff

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Retired Railway Officers' Society

At the annual meeting of the society held at the Great Eastern Hotel, Liverpool Street, on February 18, Mr. J. F. Bradford, formerly Divisional Passenger Commercial Superintendent of the L.M.S.R. at Birmingham, was elected President for 1941 to succeed Mr. J. Pike, at one time Goods Commercial Manager of the L.M.S.R., who has presided over the society with distinction for the past two years.

Mr. Bradford is peculiarly fitted to hold the position of President of the society as he has spent the whole of his life in a railway atmosphere, his father being for many years the Civil Engineer of the L.N.W.R. in South and Central Wales. Mr. Bradford joined the railway service in 1888, and during his varied railway career has held the positions of Assistant Superintendent in the Liverpool District, and Chief Assistant and subsequently Acting Superintendent, for the London District throughout the last war. The latter position of Superintendent was held by his friend and chief, Major G. Newton Ford, who was serving with the Forces. Mr. Bradford was transferred to Birmingham as District Superintendent in 1920 and remained there until his retirement in 1932. He is a member of the Institute of Transport and was for some years Vice-Chairman of the Birmingham Section.

Abnormal conditions throughout the past year somewhat curtailed the activities of the society. It was, however, found possible to hold most of the monthly meetings, although all the customary social gatherings had to be abandoned. The society has recently

Mr. H. H. Phillips

Appointed Divisional Superintendent, Cardiff, Great Western Railway

lost its oldest member in the person of Mr. H. G. Drury, formerly Superintendent of the Great Eastern Railway, who died on January 28, in his 102nd year. Among other members who have died during the year were two Past Presidents, Sir Charles L. Morgan and Mr. G. G. Senior. There is now a total membership of 129, including seven life members to whose number was added, at the annual meeting, the name of Mr. C. A. Roberts, a former Chief Goods Manager of the Great Western Railway, on the completion of 20 years of membership.

Mr. H. H. Phillips, who has been appointed Divisional Superintendent, Cardiff, Great Western Railway, entered the company's service in 1908. After a short period in the Police Department he was transferred to the General Manager's Office, where he gained experience in nearly all sections, subsequently being in charge of the department dealing with rates and fares, docks, steamboats, and rolling stock questions. From the latter part of 1914 to the beginning of 1919 he served in the Royal Marines. He is an Associate of the Chartered Institute of Secretaries and acted as Secretary of the Cork City Railways throughout the negotiations for the acquisition of that company by the Great Southern Railways under the Irish Railways Act of 1922. In 1932 he was transferred to the Office of the Superintendent of the Line to take charge of the Fares & Excursion Department, in which capacity he was closely associated with the introduction of the monthly return ticket and other developments in cheap travel facilities. At the beginning of 1938 he was appointed Assistant Divisional Superintendent at Cardiff, from which position he has now been promoted.

Mr. A. G. Banks, B.Eng., A.M.Inst. C.E., whose appointment as District Engineer, Bradford, L.M.S.R., we recorded in our February 21 issue, is 53 years of age and was educated at Bickerton House, Birkdale, and Liverpool University. He served his pupilage from 1906 to 1909 under Mr. D. C. Rattray, Chief Engineer, Lancashire & Yorkshire Railway, and began service with this railway in 1909, continuing with the London Midland & Scottish Railway after grouping. Mr. Banks was engaged on all sections of railway civil engineering, beginning in the drawing office with experience of permanent way, and bridge and structural designing; and then as Assistant to the Resident Engineer on widenings, connecting lines, dock work, etc. In the last war, Mr. Banks held a commission as Lieutenant in the 113th Company, R.E. After the war he became Resident Engineer on bridge reconstructions (Devonshire Road bridge, Blackpool, etc.); station reconstructions (St. Anne's and Thornton); and for reinforced-concrete retaining walls, etc. Mr. Banks was appointed Assistant to the District Engineer, Bradford, in 1929, the position he now relinquishes to become District Engineer.

We regret to record the death of Mr. E. Hight, Southern Divisional Superintendent, Southern Railway. Mr. Hight joined the service of the South Eastern Railway in the General Manager's office in 1896. In 1911 he became Assistant to the Western District Superintendent, and in 1914, Assistant to the Northern District Superintendent. In October, 1917, he joined the Inland Waterways & Docks (Royal Engineers), and served at Richborough. He returned to railway service in March, 1919. Mr. Hight was appointed Northern District Superintendent, South Eastern & Chatham Railway, in July, 1920, and in November, 1923, became Divisional Operating Superintendent, Central Division, Southern Railway, with offices at Southampton. In March, 1930, when both passenger and goods departments were amalgamated under the Traffic Manager, Mr. Hight assumed the duties of Southern Divisional Superintendent, the position he held at the time of his death.

The late Mr. E. Hight

Southern Divisional Superintendent, Southern Railway, 1930–1941

Mr. A. G. Banks, B.Eng.

Appointed District Engineer, Bradford, L.M.S.R.

We regret to record the death on February 14 of Mr. Alfred Smith Hampton, former Divisional Signal & Electrical Engineer, Scotland, L.M.S.R. Mr. Hampton, who was born at Brechin, Angus, trained as a draughtsman in the Royal Technical College, Glasgow, and served his apprenticeship with the Woodside Electrical Engineering Company. At the conclusion of his appren-

Photo] [Lafayette

The late Mr. A. S. Hampton

Divisional Signal & Electrical Engineer, Scotland, L.M.S.R., 1929–1936

ticeship he joined the Telegraph Department of the Caledonian Railway as a draughtsman. He became Chief Assistant to the Telegraph Engineer in 1910, and was appointed Telegraph & Electrical Engineer in 1920. After the railway amalgamation in 1923, Mr. Hampton was appointed Divisional Electrical Engineer, Scotland, L.M.S.R., and in 1929 became Divisional Signal & Electrical Engineer, Scotland, holding this position until his retirement in March, 1936. Mr. Hampton was Chairman of the Scottish Centre of the Institution of Electrical Engineers in 1922, and was a Member of the Institute of Transport and of the Institution of Railway Signal Engineers.

Mr. Benjamin King, Chairman of Chrysler Motors Limited and of Dodge Bros. (Britain) Limited, has accepted an invitation to represent vehicle importers on the Motor Transport Maintenance Advisory Committee which has been set up by the Minister of Transport and the Minister of Supply.

We regret to record the death on February 15 of Mr. Edward Rowlandson Ross, who was General Manager of the Beira & Mashonaland and Rhodesia Railways from 1910 until 1919.

Mr. F. J. Shea, formerly Chief Engineer of the South Australian Railways, who came to Great Britain on behalf of the Aircraft Production Commission, visited the United States in October-November to carry out further investigations in that country.

We regret to record the death at the age of 90 of Mr. John Glass, an employee of the Stockton & Darlington Railway and the oldest member of the Darlington Mechanics' Institute. Mr. Glass was a native of Shildon and began work in the Stockton & Darlington Railway Company's mineral office there in 1864. In 1870 he was transferred to the Mineral Manager's office at Darlington, and from 1910 was in charge of the Northgate depot and Armitage's coal depot, which had been acquired by the railway company. Mr. Glass retired on November 1, 1915, the day on which his son was killed in action in France. An interesting link with the past was the fact that Mr. Glass's father, who was one of the Stockton & Darlington Railway agents, rode in the first train from Shildon to Darlington on September 27, 1825.

Mr. John Pascoe, Deputy-Chairman of British Timken Limited, Birmingham, has been appointed Deputy-Chairman of the Fischer Bearings Co. Ltd., Wolverhampton.

The L.N.E.R. announces that Mr. E. O. Wright, Stationmaster, Sheffield (Victoria), has been appointed to act as Stationmaster at York.

The Rt. Hon. Lord Harlech, G.C.M.G., is relinquishing the position of Regional Commissioner of the North-Eastern Civil Defence Region on taking up his appointment in South Africa and will be succeeded (from a date to be arranged) by General Sir William Bartholomew, G.C.B., C.M.G., D.S.O., at present chief of the Civil Defence Operational Staff at the Ministry of Home Security.

We regret to record the death on February 11 of Lord Pitman, a Senator of the College of Justice of Scotland from 1928 to 1939. From 1903 he had been standing counsel in Scotland to the Commissioners of Woods & Forests, the Board of Trade, and the Postmaster-General.

Mr. C. F. Sullivan, General Manager of the Blaenavon Co. Ltd., has been elected a Director of the company as from January 1 last.

We regret to record the death, on February 11, of Mr. William Armstrong of Belfast in his 88th year. He was born in Lurgan and became a partner with his father in the firm of Robert Armstrong & Sons of Belfast, where he carried on business as a linen manufacturer for 60 years. Mr. Armstrong was Chairman of the former Cavehill & Whitewell Tramway Company which ran from Chichester Park to Glenormley. The undertaking was subsequently sold to the Belfast Corporation.

We regret to record the death on February 21 of Sir Allan Smith, LL.B., who was Unionist M.P. for Croydon South from 1919 to 1923, and formerly Chairman of the Board of Management of the Engineering & Allied Employers' National Federation.

Mr. J. J. Brinkworth, Superintendent of the New York Terminal District & River Division (West Shore), New York Central System, has been appointed Assistant General Manager, Line East, Syracuse.

Mr. C. J. Rogers, Vice-President & General Manager, White Pass & Yukon Railway, has been elected President, in succession to Mr. H. Wheeler who has retired.

Indian Railway Staff Changes

Mr. A. C. Dunsdon has been confirmed as Deputy Chief Engineer, E.I.R.

Mr. Rangbihari Lal, on return from leave, has been appointed Officiating Financial Adviser and Chief Accounts Officer, N.W.R., as from October 6 last.

Mr. L. N. Flatt, V.D., Officiating Director, Mechanical Engineering, Railway Board, reverted to his substantive post of Chief Mechanical Engineer, N.W.R., as from October 17 last.

Mr. H. H. Cooper who was officiating in place of Mr. Flatt reverted to Deputy Chief Mechanical Engineer on October 22.

Mr. J. E. Heining, Officiating Deputy General Manager, N.W.R., has been appointed Deputy Chief Engineer on the railway as from September 24 last.

Awards for Gallantry

The following awards have been made to railwaymen:—

George Medal

Mr. Reginald Gant, Motor Fitter, Southern Railway.

Two gas holders were set on fire by an enemy bomb. The fire brigade were in attendance and were playing jets of water on to the burning holders. The gas company rescue party were also doing all possible to restrict the fire. Mr. Gant climbed up a ladder and on to the top of the third holder. He was followed by two or three men of the gas company rescue party. They handed him a lump of wet clay and, whilst the firemen played their hoses on to a broken plate, Gant went forward and sealed this hole with the clay. Flames were issuing and were about 4 ft. high. Having succeeded in stopping this hole, the party then came down to the side of the holder where there were two other holes. The first hole was then stopped in a similar way and then the last hole was tackled. This was much bigger and the flames coming from it were at least 6 ft. long. More pressure was put on the hoses and then Gant went forward with a very large piece of clay, and covered the hole at the first attempt. He stayed long enough to make sure the job was a success and then came down with the rest of the men. Gant's action was very courageous. He ran a great risk and was at times completely enveloped in flames.

Mr. Ivor T. Davies, Engine Driver, G.W.R.

Mr. Frank R. Newns, Engine Fireman, G.W.R.

Driver Davies and Fireman Newns were working on shunting engines when serious fires were caused by enemy action involving railway and dock warehouse properties. Incendiary bombs fell, some among a train-load of ammunition and various trucks containing petrol in tins. Davies and Newns helped to operate a stirrup pump on a burning wagon containing aerial bombs, and when these were sufficiently cool they levered them apart and removed the incendiaries.

Mr. George Grimwood, Lengthman, L.P.T.B.

After a bombing attack, Grimwood volunteered to enter a deep crater on the track, where there was an unexploded bomb, to examine the underside of the track. Next day, when it was necessary for a hole to be dug Grimwood volunteered.

British Empire Medal

Mr. John W. Booth, Goods Porter, L.M.S.R.

Mr. Arthur J. Kempson, Temporary Welder, L.P.T.B.

Mr. George McCullough, Temporary Welder, L.P.T.B.

Mr. Alfred E. Sharman, Tram Driver, L.P.T.B.

Commendation

Mr. Arthur Richard Wilson, Signal Lineman, L.M.S.R.

XUM

TRANSPORT SERVICES AND THE WAR—79

London Transport medal for bravery—Indian railways war effort—Berlin traffic after air raids—Privately-owned railways in Sudetenland—Railway control in Belgium and Occupied France

During the past few days the L.M.S.R. has modified its instructions regarding maximum wartime speeds for express trains, and drivers are now permitted to travel up to 75 m.p.h. (of course subject to the observance of engineering speed restrictions) in order to regain lost time. The timetable continues to be based on the wartime maximum of 60 m.p.h.

London Transport Medal for Bravery

On February 21 Lord Ashfield, Chairman of the London Passenger Transport Board, made the first awards of the London Transport Medal for Bravery which has been instituted to mark the recognition of deeds of special bravery by members of the staff in the discharge of their duty. The medal, which is of silver, was designed by J. R. Pinches; the obverse side shows a male figure in the act of turning a large wheel and symbolises the manifold activities of those who keep the wheels of transport turning. On the reverse side, below the words "London Transport" and separated from them by sprays of laurel, is engraved the recipient's name followed by the words "For Bravery and Devotion to Duty," and the date of the act in respect of which the medal is awarded. The medal is mounted on a swivel bar and hangs from a ribbon in which three colours—red, white, and green—are used in vertical stripes. The institution of this award was recorded at page 527 of our November 15, 1940, issue. The men who were decorated by Lord Ashfield were :—

E. H. Wright (Inspector), E. C. Wright (Inspector), F. E. Foord (Inspector), T. W. S. Large (Inspector). When a large number of incendiary and high-explosive bombs were dropping on buildings surrounding a bus station, these men cleared 18 vehicles from the station while surrounding buildings were on fire.

E. J. Gilbert (Inspector). When an unexploded bomb fell near an underground station, he conducted the Disposal Squad of the Royal Engineers to the scene and assisted them. He had displayed exceptional courage and resource on frequent occasions.

The London Transport medal for bravery and devotion to duty

G. Grimwood (lengthman), who has also been awarded the George Medal for his bravery.

A. E. Sharman (driver, trams and trolleybuses), who has also been awarded the Medal of the Order of the British Empire.

A. J. Kempson and G. McCullough (temporary welders), who have also been awarded Medals of the Order of the British Empire.

In presenting the medals Lord Ashfield expressed his admiration of the way in which the staff had carried out its duties in recent times, often under fire. He said that there are more than 12,600 employees of the board with the Forces and he spoke of the heroism displayed by the former London bus men in bringing supplies over the Libyan desert to General Wavell's victorious army. On the home front the board had 78,000 men and women carrying on the transport services which were essential to the life of London. Some 15,000 of the men still in the service of the board had voluntarily undertaken Home Guard duties in the board's unit.

G.W.R. Mobile Fire-fighting Trains

Three mobile fire trains in scarlet livery have been provided on the Great Western Railway system and are stabled at strategic points, as we recorded briefly at page 205 last week. Each train consists of a passenger coach for the accommodation of a crew of eight, and a specially-adapted covered carriage truck which houses two light trailer pumps complete with full accessories such as hose, stirrup pumps, Redhill container sets, sand and water buckets, fire extinguishers, and hatchets. The light trailer pumps have a delivery of 130 gal. a minute and are similar to those extensively in use by the A.F.S. Each covered carriage truck has been equipped with block and tackle to enable the pumping units to be lowered to the ground at sites where no platform is available. The trains are available for use at any time during the 24 hours, and arrangements have been made so that they would have an uninterrupted run to the scene of a fire. Emergency rations for the pump crews are carried in the coaches, which are also equipped with a stove and oven to enable the men to heat their food if necessary. Photographs taken at Paddington station on February 17, when Mr. William Mabane, M.P., Parliamentary Secretary to the Ministry of Home Security, inspected one of the trains, are reproduced at page 226.

War Effort of Indian Railways

Indian railways quickly changed over to a war footing and are now making a substantial contribution to the production of war supplies and the transportation of military traffic. Whole workshops have been turned over to the production of munitions, military Construction and Operating Companies have been raised, and special arrangements made to deal with increased traffic.

Orders for war material completed or in hand include the manufacture of 150,000 tent poles, 1,200 motor vehicle bodies, firing platforms, trench mortars, gauges for munitions manufacture, machine tools, S.A.A. tools, several hundred thousands of grenades, ammunition boxes, some 200,000 shell bodies, thousands of stirrups and bits, steel huts, and flannel shirts. Over 1,600 tons of wood have been sawn into scantlings. Many new railway sidings have been constructed for serving depots and other requirements of the Defence Department and in most cases material has had to be arranged for and construction carried out in record time. Bridge workshops have been utilised to fabricate steelwork for buildings required for the army and, not infrequently, the railways have erected buildings for the Defence Department.

In the very early stages of the war, it was realised that

to provide for accelerated and more efficient production it would be better to concentrate the war work of railway workshops in certain shops. The Railway Board, accordingly, offered the Master-General of Ordnance certain large workshops, including the services of the whole of their staff for the production of munitions. This has necessitated special arrangements being made on other railways for repairs of rolling stock which were previously carried out in the shops which have been handed over for munitions production.

Technical Railway Units in India

Under a carefully-planned scheme of work, several new units have been formed and are now functioning at full length. These are:

1. A Railway Construction Company.
2. A Railway Operating Company.
3. A Railway Stores Section.
4. A Railway Survey Section.

The Railway Construction Company consists of about one-third railway personnel and two-thirds on draft from a Sappers' and Miners' unit, R.E. The other units are made up almost entirely of railway staff. Arrangements have been completed to raise further railway units as soon as orders are received.

War Stores Section of the Indian Railway Board

Shortly after the outbreak of war, a War Stores Section was created in the Railway Board. The duties of this section embrace all matters concerning the supply and delivery of materials and stores to railways, and of railway stores and materials to the Defence Department. The section is in constant touch with the Department of Supply, the Indian Stores Department, and Army Headquarters. It was through this branch that the Railway Board until recently acted as a purchasing unit for coal for the Supply Department. Before the war actually started the railways were advised to create a reserve of six months' supplies of imported stores over and above their normal requirements for reserve. The wisdom of such a step has been proved, as up to the present no serious shortages have occurred. Every endeavour is being made to use Indian resources to the full before considering the import of essential materials. One of the more important experiments made in this connection relates to a substitute flax hose. The East Indian and the Bengal-Nagpur Railways are testing Indian-made rubber hose as a substitute, and so far the results are very satisfactory. Railways are one of the principal sources of scrap steel, stocks of which are controlled. As regards non-ferrous metals, every endeavour is being made to conserve stocks, and scrap metals are being refined by recognised firms into virgin metal and alloys. In order to conserve materials, train speeds have been reduced.

Technical Training of Munition Workers in Indian Railway Shops

The Railway Department has also undertaken to co-operate with the Labour Department in a scheme for the technical training of personnel for war work, and arrangements have been made for some 1,800 men to be trained in railway workshops in skilled trades. This is in addition to the normal schemes of apprentice training for railway work.

An increase has taken place in railway traffic directly attributable to the war, and among the more important measures taken to deal with this development are the appointment of a Transport Advisory Officer in Calcutta to deal with the transport of coal and the formation of a metre-gauge wagon pool for Northern India on the lines of the broad-gauge wagon pool.

A.R.P. in India

General A.R.P. measures, such as the dimming of lights, are being taken by all railways and special measures taken to guard a railway's vital points in vulnerable areas are being considered by individual railways.

Calcutta Railways Carry on Under Blackout Conditions

The trial blackout that was staged in Calcutta and its suburbs on December 11 between 7 p.m. and 12 midnight proved a complete success. The intention of the trial was to accustom people to carry on their normal business under A.R.P. conditions, and so far as the Calcutta railways were concerned, this object was fully achieved, and without any misadventure. Howrah and Sealdah stations which normally provide a blaze of light presented an eerie appearance on that evening. Lights within the station premises were so dimmed as just to enable passengers to find their way to and from the platforms. Trains entered and left the stations according to schedule with internal lights dimmed and windows shuttered. Engine headlights were not in use while the trains were within the A.R.P. zone.

Century-Old Canadian Ferry Discontinued

One of the oldest ferry services on the St. Lawrence River has recently been discontinued. This is the one plying between Brockville, Ont., and Morristown, N.Y., U.S.A., which has operated for about a hundred years. During the winter the ferry has always been suspended owing to ice on the river, but it is understood that the service will not be resumed, as the proprietors state that the Border crossing restrictions, due to the war, have made it unprofitable.

The new Canadian National Railways terminal at Montreal has been so advanced that the engineers are now ready to begin work on the alterations to Victoria bridge over the river involved in this scheme. When this is finished, motorists are promised exceptional facilities for the use of this historic viaduct, which was briefly described at page 542 of our November 22, 1940, issue.

Berlin Traffic After Air Raids

Very little precise information has reached this country concerning the interruption of local transport services in Berlin as the result of R.A.F. air raids, but a recent report which originated with the American Embassy in Berlin indicates that buses, trams, and trains on the elevated and underground lines in Berlin are required to stop at the nearest traffic point or station when the air raid alarm is sounded, and to discharge their passengers to take refuge in the nearest shelters. Accordingly it became necessary to consider the problems of those members of the population who had been forced to take temporary shelter during the alarm and who were therefore away from home when the " raiders passed " indication was given. The regulation was therefore introduced that trains and vehicles must continue their journeys when the " raiders passed " signal is given, even although it may be long after the hour when their services would normally have ceased. Transport is thus provided for approximately 30 minutes after the conclusion of a raid warning period. The main purposes of this regulation are to cause drivers, conductors, and motormen to report back to their depots, together with their vehicles (and thus be available for the next day's traffic), also to permit passengers to complete interrupted journeys and to enable any other persons who had not yet had the opportunity of returning home to do so.

Private Railways in Sudetenland

Many of the private railways in those parts of Sudetenland incorporated into the German Reich have become the property of the Reichsbahn in accordance with a Law published in the *Reichsgesetzblatt* of September 11, 1940. The following are the local railways thus nationalised: Troppau-Grätz, Weckelsdorf-Parschnitz, Hannsdorf-Mährisch Altstadt, Petersdorf-Winkelsdorf, Grosspriesen-Wernstadt-Auscha, Plan-Tachau, Ludenburg-Eisgrub, the Hohenfurth electric railway running from Zartlesdorf to Lippnerschwebe, and the railways of the Friedland district. Berlin railway circles state that the nationalisation of these railways is the result of special circumstances, and does not imply a change in the Reich transport policy in regard to private railways which are not run by the Reichsbahn. Prior to the incorporation of the Sudeten-German districts, the local railways in question had been run by the former Czechoslovak State Railways, which had been obliged for some time to forego collecting the operating costs from the local companies and had even been advancing funds to those railways where it had proved impossible to cover operating expenses and to meet the financial charges on their loans and preferred shares. In nationalising the Sudeten railway companies the Reich has not needed to pay cash to the former owners. In the case of the Friedland

district railways all shares were the property of the former Czechoslovak State, and hence are now regarded as being at the disposition of the Reich. With respect to all other lines there existed claims in favour of the Czechoslovak State (primarily in regard to arrears in meeting operating expenses), which are far higher than the sums necessary to carry out the nationalisation, and these claims are now being used by the Reich for the purpose of balancing the account. All creditors of the railways will be satisfied in full, including the holders of preferred shares, who are regarded as occupying the position of creditors holding interest-bearing loans. As these railways have no personnel of their own, the adminstrative services have been handled by the Reichsbahn since October, 1938.

Goods Transport in Czecho-Slovak Territories

With the incorporation of Sudetenland into Germany and the subsequent break-up of the remaining portions of Czechoslovakia, Customs frontiers were not established between Sudetenland, Slovakia, and the Protectorate of Bohemia & Moravia. Under an Order made by the German Minister of Finance on September 25 last, and which is effective from October 1, 1940, to March 31, 1941, imports of merchandise from Slovakia into the Protectorate of Bohemia & Moravia and into Sudentenland are still exempt from import duty provided such goods are consumed or processed in these areas. It will be recalled that a customs and monetary union between Germany and the Protectorate of Bohemia & Moravia became effective from October 1 last, as recorded at page 368 of our October 4, 1940, issue.

Railway Control in Belgium and Occupied France

We recorded last week (page 207) that the operation of a portion of the Belgian railway system is under the control of the railway administration, while other parts are worked by the railway management of the German Army of Occupation. From reliable information subsequently received, it seems that the Belgian coastal regions, to a depth about which no public information is available, have been constituted a German " defence area," and that this is the reason why the railways are under direct German military management. Elsewhere in Belgium the railways are under the administration of the Belgian National Railways, subject to general German direction. Similar conditions apply in occupied France where the north coast is also a German " defence area," with the railways under German military control and operation. In the remaining parts of occupied France the administration of the French National Railways still exists. Persons wishing to enter these " defence areas " must be in possession of a permit from the German military authorities. This is issued only to those having urgent business reasons for entering the areas, and only after a delay of some days in order to enable enquiries to be made into the *bona fides* of the applicant.

Transport Friction in Holland

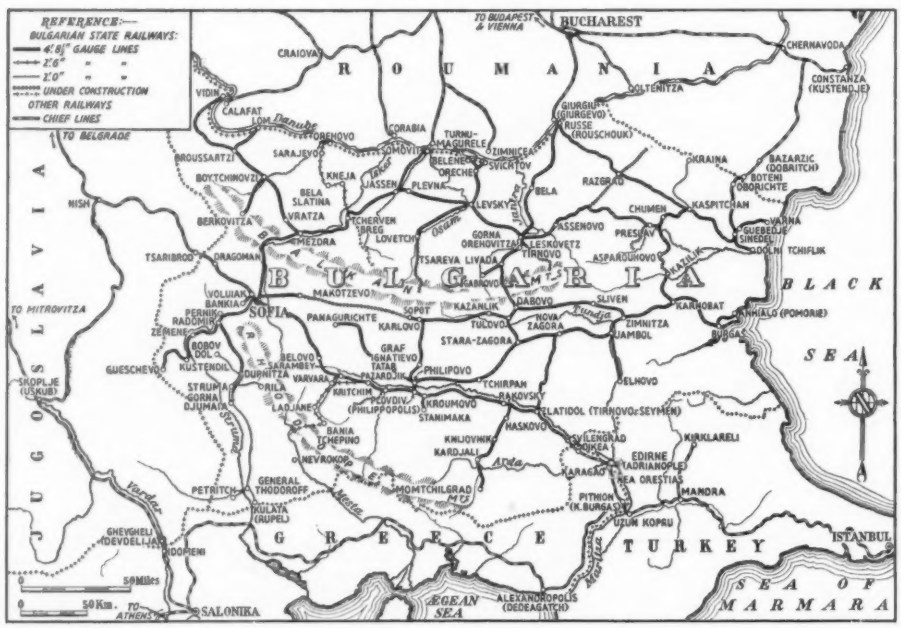
The German authorities in Holland have made strenuous efforts to organise Dutch industries and agriculture in the interests of the German war machine. The usual spring industrial fairs in Utrecht and Leipzig are to be held in March, and the Netherlands Railways have been instructed to grant special facilities for the transport of exhibits and for visits to the fairs; special trains and reduced fares have been announced, at a time when passenger and goods traffic by rail is otherwise discouraged.

Reports have reached us of conflicts between the Dutch management of the railways and the German occupation authorities. The President of the Netherlands Railways was arrested recently, after having resisted the transfer of locomotives and passenger rolling stock to Germany—goods rolling stock was to all practical purposes already pooled with German stock—and for issuing an order, without consulting the German authorities, to give preference to inland coal and food transports. Earlier friction had occurred when the railway management had refused to place the Dutch royal train at the disposal of the German governor. As a reprisal the railways were temporarily operated under German Reichsbahn and military direction. Appeasement is still being tried out by the Germans, and since the beginning of this year the railways are being operated by the Dutch board, under German military control.

Transport Disorganisation in Bulgaria

Vague and contradictory reports concerning the extent of the German " civilian " penetration of Bulgaria continue to arrive from most of the neutral sources. The drastic curtailment of train services on the Bulgarian State Railways which was announced on February 11 (see page 207 of our February 21 issue) continues in force. On Sunday last, February 23, all motor traffic in the Sofia district was stopped on police orders to keep the roads clear. Police permits for motorists were necessary even in the shortest journeys outside the boundaries of the capital. Some days earlier signposts with indications in German had been placed on the principal north-south roads in Bulgaria.

The northern frontier region along the right bank of the River Danube has been declared a restricted area from which foreigners are excluded. German military forces operating from the Roumanian side of the Danube are reported to have placed pontoon bridges across the river at a number of places—stated by some sources to be as many as 40. The continuance of ice in the lower reaches of the Danube would seem to have prevented final positioning. A persistent story was circulated on February 22 to the effect that a double-track railway had been laid on pontoons between Giurgui (Giurgevo) and Russe (Rouschouk), but this has been denied. The groups of " civilian " Germans who were reported on February 14 to be occupying Bulgarian railway stations are officially described by the Bulgarian authorities as " instructors."



Sketch map of the railway system of Bulgaria before the recent frontier adjustment between Bulgaria and Roumania in the region to the south of Constanza

Questions in Parliament

Recruitment of Special Constables

Mr. W. Dobbie (Rotherham—Lab.), on February 18, asked the Secretary of State for Scotland under what authority a chief constable refused admittance of a citizen to membership of a special constabulary, and at the same time refused to give reasons for such refusal; if he had any further statement to make as to railwayman H. Griffin, of Greenock, who made such application and was rejected, and the reason thereof refused.

Mr. T. Johnston (Secretary of State for Scotland): The appointment of special constables is made by the magistrates in terms of Statute, but the recruitment of personnel is invariably left to the discretion of the Chief Constable who is under no obligation to disclose to an applicant the grounds of his decision in selecting candidates. I am unable to add further to my predecessor's reply to the representations submitted by my hon. friend.

Mr. Dobbie: In view of the facts, is the Minister not prepared to review the situation with the object of giving further instructions to chief constables, as railwaymen in particular feel that this is a precedent creeping into the Government of the country?

Mr. Johnston: The point at the moment is that these matters are dealt with by Statute. It would obviously be a matter of great difficulty to lay down the rule that any applicant, whether railwayman or any other applicant, should be given a reason.

Workmen's Tickets

Mr. Vernon Bartlett (Bridgwater—Ind.), on February 19, asked the Minister of Transport (1) whether the validity of workmen's tickets on the railways would be extended to cover a period of two days for fire-watchers who had to spend the night at their works or offices; and (2) whether he could arrange that workmen's tickets should be available for fire-watchers proceeding to their duties in the evening.

Lt.-Colonel Moore-Brabazon: I do not think that it would be fair to the railway companies to place on them the cost of extending workmen's fares in the manner suggested. The concession to full-time Civil Defence workers which I announced on January 30 in reply to the hon. member for Stratford (Mr. Groves) is being extended to fire-watchers, who normally avail themselves of workmen's tickets, when travelling between their homes and work places.

Mr. Bartlett: Does that mean that people who are trying very hard to carry on with their ordinary, essential jobs and at the same time are doing one night a week at fire-watching, will get no benefit at all?

Lt.-Colonel Moore-Brabazon: They certainly get benefit, but it will be impossible to extend it without very grave inquiry. We are all fire-fighting now, and this suggestion really means a reduction of fares throughout the country.

Parliamentary Notes

The Great Western Railway (Variation of Directors' Qualification) Bill was read a Second time in the House of Commons on February 18, and referred to the Examiners of Petitions for Private Bills.

Great Northern Railway (Ireland)

Application for increases in rates

The Great Northern Railway (Ireland) applied on February 12 to the Railway Tribunal, Dublin, to sanction increases in rates and charges for the carriage of certain merchandise traffic including returned empties, general merchandise such as bricks, artificial manures, grain, dead pigs, bread in cases, and various kinds of timber. Also, for a percentage increase in the carriage of passenger train traffics such as bicycles, motorcars, caravans, boats, dogs, and machines.

In the application the company stated that it had increased in Northern Ireland rates and charges by approximately 25 per cent. over those in operation in September, 1939, and also in Eire in cases where the maximum charges provided for in Section 31 of the Railways Act, 1934, had not been reached. The company stated that operation costs had increased substantially and there was every indication that there would be still further increases which made it imperative to secure additional receipts. There was no objection made to the increases by any trader in Northern Ireland and it was necessary to have uniform rates for the whole system. Although there was an increase of £182,902, or 15·61 per cent. in the traffic receipts during the past year, expenditure had increased by £176,741 or 16·22 per cent.

The representative of the Minister for Industry and Commerce said that it appeared that the rates on goods should be kept as low and reasonable as possible rather than the fares on passengers. He pointed out that the companies on account of the present emergencies have become virtually the only transport carriers in Eire and that for the same reason there had been a considerable increase in unemployment and many essential commodities had become scarce. In the present condition of emergency and in deciding what would be just and reasonable for the railway company the court would weigh up these claims in the light of present circumstances against the difficult position in which the private citizens were obliged to live.

Mr. Howden, General Manager of the Great Northern Railway, said that the improvements in the rates could not keep pace with the increase in expenditure. To find the necessary additional revenue it had been decided that the extra surcharge on rates for traffic by goods trains and by passenger trains should be further increased. Apart from every other kind of increase in expenditure the company was meeting an increased salary and wages bill not less than £90,000 over pre-war years and there was no evidence that the traffic receipts would increase during this year so as materially to benefit the company. The proposed increases did not include passengers' parcels by passenger train, livestock and mineral traffic, including coal.

Judge O'Brien reserved judgment.

STAFF AND LABOUR MATTERS

Wages and Prices

In a letter, published on February 12, Sir Ronald Matthews, President of the Association of British Chambers of Commerce, wrote to the Prime Minister as follows:—

"The executive council of this association is gravely perturbed at the present drift towards inflation. In practically every industry in the country substantial increases in wages have been or are about to be conceded, and these concessions will inevitably be followed by rises in commodity prices and transport charges. The 'vicious circle' is in fact in operation.

"The council feels that if serious consequences are to be avoided this tendency should be checked at once by the adoption of a wages policy which will take note not only of the need for stabilising wages rates, but also of the desirability of preventing widely different rates from being paid in different industries calling for equal skill and effort and often located in the same areas.

"It should also be borne in mind that expanding and considerable differences between wages of reserved workers and the pay and allowances of serving men are apt to create a feeling of inequity in the minds of the latter, especially at a time when so many men in the Services are in the United Kingdom.

"The executive council recognises the justice of the contention that wages must be dependent to a reasonable extent upon prices, and therefore urge most strongly that the Government should at once take all steps necessary to peg the cost of the essential items on a revised cost of living index, and coincidentally stabilise wages throughout industry."

XUM

Notes and News

Death Penalty for Carelessness in Spain.—In consequence of the increase in the number of accidents on the Spanish railways, the Madrid Government has issued an order to the effect that official inquiries shall in future be carried out by military tribunals, with special powers to punish cases of extreme carelessness with the death penalty.

Marine & Locomotive Superheaters Limited.—Notice is given in *The London Gazette* of February 18 that creditors of this company, which is being voluntarily wound up, are required to send their names, addresses, and particulars of claims, to the Liquidator, Mr. Harold Melhuish, Holme Lea, St. Margarets Road, Bowden, Altrincham, Cheshire, by March 4. The notice given is formal. All creditors have already been paid in full.

Road Accidents in January.—The number of persons reported to have died in Great Britain during the month of January last as a result of road accidents was 741, which compares with 620 in January, 1940. Of these 402 (compared with 406) were adult pedestrians, and 172 (compared with 115) were pedal cyclists. Deaths resulting from accidents occurring during hours of darkness declined from 462 in January, 1940, to 432 in January this year. During other hours the figure rose from 158 to 309.

Substantial Indian Railway Surplus Expected.—A Reuters message, dated February 19, from New Delhi, states that the revised Indian railway estimates for the year ending March 31, 1941, and the budget estimates for 1941-42 were presented to the Indian legislature on that date by Sir Andrew Clow, Member for Communications. A surplus of nearly £11,000,000 is now expected at the close of the current financial year, and for next year one of slightly over £8,750,000 is estimated as probable. Traffic receipts in 1940-41 should, if reasonably sustained during the next six weeks, total about £82,000,000 on March 31, or £8,750,000 more than in 1939-40. The smaller estimated surplus in 1941-42 is based on the fact that receipts last January were abnormally high and are unlikely to be repeated next January.

Canadian National Railways.—Gross earnings in January, 1941, amounted to $20,926,967, an increase of $3,325,232; operating expenses at $17,776,573 were greater by $1,846,634. Net earnings at $3,150,394 were higher by $1,478,598.

Canadian Pacific Railway.—Gross earnings for the week of February 21, 1941, were $3,235,000, an increase of $452,000 as compared with the like week of 1940. Aggregate earnings from January 1 to February 21 were $24,747,000, an advance of $3,628,000.

Another Snowstorm in Scotland.—A second severe snowstorm recently isolated Caithness and parts of Sutherland for several days. A passenger train from Inverness to Wick was snowed up a quarter of a mile north of Forsinard station, Sutherland, and 100 passengers had to remain on the train all night and part of the next day.

Karachi Port Trust.—Ordinary revenue receipts for the year ended March 31, 1940, were Rs. 72,78,008, as against Rs. 78,20,839 in the previous year, a decrease of 7 per cent. Revenue account expenditure on ordinary items was Rs. 70,23,440, as against Rs. 69,99,454 in the previous year, an increase of less than 1 per cent. There was a surplus of Rs. 2,54,568 on the year's working. A sum of Rs. 44,000 was transferred from the revenue account for capital works and the reserve fund stood unchanged at Rs. 59,85,388 at the end of the year.

English Electric Co. Ltd.—Mr. G. H. Nelson, M.I.E.E., Chairman & Managing Director, at the recent annual meeting said that there seemed every reason to believe that a company such as his, with a long tradition of technical knowledge and skilled craftsmanship, together with a good commercial relationship in every part of the world, and fortified by the protective armour of a sound balance sheet and strong finance, could not fail to find a wide field of fruitful activity before it both in the home and export markets. He drew the attention of the Government to the fact that the Excess Profits Tax in its present form was no less likely to jeopardise the stability of employment of workpeople than to diminish the income of shareholders. The company would continue to work for the removal of anomalies that caused the tax to be neither fair nor wise.

Irish Traffic Returns

IRELAND		Totals for 6th Week			Totals to Date		
		1941	1940	Inc. or Dec.	1941	1940	Inc. or Dec.
		£	£	£	£	£	£
Belfast & C.D.	pass.	2,571	1,958	+ 613	17,128	13,729	+ 3,399
(80 miles)	goods	952	475	+ 477	6,280	2,936	+ 3,344
	total	3,523	2,433	+ 1,090	23,408	16,665	+ 6,743
Great Northern	pass.	12,250	7,950	+ 4,300	69,150	51,050	+ 18,100
(543 miles)	goods	16,100	11,800	+ 4,300	83,650	68,200	+ 15,450
	total	28,350	19,750	+ 8,600	152,800	119,250	+ 33,550
Great Southern	pass.	33,858	25,698	+ 8,160	193,432	164,331	+ 29,101
(2,076 miles)	goods	51,237	41,301	+ 9,936	295,859	246,657	+ 49,202
	total	85,095	66,999	+ 18,096	489,291	410,988	+ 78,303
L.M.S.R. (N.C.C.)	pass.	6,170	3,490	+ 2,680	38,130	21,940	+ 16,190
(247 miles)	goods	6,400	3,430	+ 2,970	33,890	18,760	+ 15,130
	total	12,570	6,920	+ 5,650	72,020	40,700	+ 31,320

British and Irish Railway Stocks and Shares

Stocks	Highest 1940	Lowest 1940	Prices Feb. 25, 1941	Prices Rise/Fall
G.W.R.				
Cons. Ord.	52	22½	33*	−3
5% Con. Pref.	103½	58	88½*	−½
5% Red. Pref. (1950)	105½	88	99½	—
4% Deb.	107½	90½	103½	−½
4½% Deb.	108½	96½	108	—
4½% Deb.	114½	96	113½	—
5% Deb.	124	106	122½	—
2½% Deb.	66½	57	63	—
5% Rt. Charge	117½	97	118	—
5% Cons. Guar.	117	90½	112*	−2
L.M.S.R.				
Ord.	24⅞	9	12*	−2
4% Pref. (1923)	60½	21⅜	36½*	−1½
4% Pref.	70½	35	53½	—
5% Red. Pref. (1955)	94½	60	81½	—
4% Deb.	101½	81	98	−½
5% Red. Deb. (1952)	109½	102	108	—
4% Guar.	93½	65	87¼*	−1½
L.N.E.R.				
5% Pref. Ord.	8⅜	1½	2⅜	−⅛
Def. Ord.	4⅜	1½	1⅜	—
4% First Pref.	60	20	36½*	−½
4% Second Pref.	22⅞	6½	12⅜*	−1⅜
5% Red. Pref. (1955)	80	34½	57½	—
4% First Guar.	86½	56	77½	−1½
4% Second Guar.	77½	37	64	—
3% Deb.	73½	54½	71	+½
4% Deb.	97⅜	74	93	—
5% Red. Deb. (1947)	107	96½	103	—
4½% Sinking Fund Red. Deb.	104	98	100½	—
SOUTHERN				
Pref. Ord.	79	34	47½*	−2
Def. Ord.	22½	7	9½*	−1
5% Pref.	104½	58¾	83½*	−3¾
5% Red. Pref (1964)	105	85	94½	—
5% Guar. Pref.	116¾	90	112½*	−2½
5% Red. Guar. Pref. (1957)	114 1/16	94	110½	—
4% Deb.	106¾	84½	103¾	−¾
5% Deb.	122½	100	122½	—
4% Red. Deb. (1962–67)	106	96½	103	—
4% Red. Deb. (1970–80)	106¾	93	103	—
FORTH BRIDGE				
4% Deb.	95½	87	86½	—
4% Guar.	93½	81½	85½	—
L.P.T.B.				
4½% "A"	116	103	112½	+1
5% "A"	121½	107	119½	−¾
4½% "T.F.A."	105½	101	120½	—
5% "B"	116	102	106½*	+1¼
"C"	65½	24	33*	−1
MERSEY				
Ord.	26	18½	23½	—
4% Perp. Deb.	92½	86½	91½	—
3% Perp. Deb.	68	63	60½	—
3% Perp. Pref.	57	50½	54½	—
IRELAND				
BELFAST & C.D.				
Ord.	4	3	4	—
G. NORTHERN				
Ord.	4½	1½	4½	—
G. SOUTHERN				
Ord.	12½	4	8	+1½
Pref.	15½	6	10	—
Guar.	36	15	26	—
Deb.	55½	40	52	—

* ex divid end

OFFICIAL NOTICES

London Midland & Scottish Railway Company

NOTICE is hereby given that a SPECIAL GENERAL MEETING of the London Midland & Scottish Railway Company will in compliance with the Standing Orders of Parliament be held at Euston Station, London, N.W.1, on Tuesday, the 11th day of March, 1941, at 12 o'clock noon precisely, for the purpose of considering and if so determined of approving the undermentioned Bill, namely :—

BILL PROMOTED BY THE COMPANY.
DEPOSITED IN PARLIAMENT.
London Midland & Scottish Railway Bill.

A Bill to empower the London Midland & Scottish Railway Company to acquire lands ; to amend the London Midland & Scottish Railway Superannuation Scheme ; to authorise the Midland and Great Northern Railways Joint Committee to acquire lands ; and for other purposes.

STAMP OF SHORTLANDS, Chairman.
G. R. SMITH, Secretary.

Euston Station,
London, N.W.1.
24th February, 1941.

Crown Agents for the Colonies

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ASSISTANT LOCOMOTIVE SUPERINTENDENT required for the Gold Coast Government Railway for two tours of 12–24 months each with possible permanency. Salary £475 rising to £840 a year. Free passages and quarters and liberal leave on full salary. Candidates, aged 25–35, must have served an apprenticeship or pupilage in the locomotive works of a British railway or firm of locomotive builders and have had at least three years' subsequent running experience. Preference will be given to candidates who are Associate Members of the Institution of Mechanical Engineers or possess an equivalent qualification.

Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience and mentioning this paper to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/9592.

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is noon on Wednesday. All advertisements should be addressed to :—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

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Railway & Other Reports

Forth Bridge Railway Company.—Net revenue for the year 1940 was £121,933 (against £123,947). Dividend on the ordinary stock is again 4 per cent. Balance due to L.N.E.R. nil (against £2,014).

Mersey Railway Company.—The board on February 20, 1941, resolved to recommend a dividend on the consolidated ordinary stock of £1 15s. per cent., less tax, for the year 1940. The dividend for 1939 was £1 12s. 6d. per cent.

Bengal & North Western Railway Co. Ltd.—Gross earnings for the half-year to September 30, 1940, were Rs. 2,01,99,000 (against Rs. 1,67,16,166) and working expenses were Rs. 92,05,000 (against Rs. 89,73,073). The company's share of net earnings in sterling, after Indian taxes, was £372,150 (against £220,853). Dividend for year is again 16 per cent.

Santander-Bilbao Railway.—The report for 1939 shows a considerable increase in traffic receipts. The gross earnings for the Santander-Bilbao section amounted to 6,126,000 pesetas, against 5,261,000 pesetas, working expenses being 4,911,000 pesetas, against 4,299,000 pesetas. For the Bilbao-Palencia line, receipts had risen to 2,310,000 pesetas from 1,741,000 in 1938, and expenses were 1,248,000 against 1,137,000 pesetas. Ratio of working, for the former 80·16 per cent. and for the latter 54·01 per cent. Adding sundry receipts and motorbus earnings, the net available was 1,249,653 pesetas, and after clearing past years' deficits there remained a balance of 251,085 to be carried forward.

Wagon Finance Corporation Limited.—Revenue for the year 1940 was £65,377 (against £74,510). Income tax, N.D.C. and expenses absorbed £15,139 (£12,785), board fees, £2,500 (same), brokerage £218 (£487), and interest £35,054 (£42,558). The amount brought forward was £18,205 and the total available is £30,670 (£38,127). Final dividend is 5 per cent. making 10 per cent. for the year against a total of 17½ per cent. (including 2½ per cent bonus). Reserve receives £5,000 (same) and £18,170 is carried forward.

Davies & Metcalfe Limited.—Final dividend of 7 per cent. again makes total for year of 10 per cent. Net profit is £16,899 (against £14,328).

Consolidated Signal Co. Ltd.—Net profit for year to September 30, 1940, was £22,318 (against £25,441). Ordinary dividend is again 17 per cent. less tax.

English Electric Co. Ltd.—Trading profit for year 1940 was £517,066 (against £484,215) and net profit was £363,736 (£355,656). Ordinary dividend is again 10 per cent. and £100,000 is again placed to reserve. The amount carried forward is £54,495 (against £56,840).

Vickers Limited.—The board of Vickers Limited on February 21 declared dividends of 2½ per cent., actual, less tax, on the preferred 5 per cent. stock, 2½ per cent., actual, less tax, on the 5 per cent. preference stock, and 2½ per cent., actual, free of tax up to 6s. in the £, on the cumulative preference stock, making in each case 5 per cent. for the year 1940.

Canadian Car & Foundry Company.—Total income for the year to September 30, 1940, is $1,505,258. Deducting $102,455 for fees, legal expenses, etc., $660,220 for depreciation, and $265,000 for taxation, there remains a net profit of £477,580, compared with the net loss of $504,815 for the previous year. With $2,788,320 brought in, the surplus carried forward is $3,265,901.

Contracts and Tenders

An order for 115 70-ton covered-top hopper-bottom freight wagons for cement and other commodities loaded in bulk, and costing approximately $500,000 is announced by the Illinois Central Railroad. The wagons will be built by the General American Transportation Corporation and will be delivered in April and May. The Illinois Central purchased 62 70-ton covered-top hopper-bottom wagons in 1940 at a cost of approximately $250,000. The present order is to meet a fast-growing demand for this type of equipment.

The British Aluminium Co. Ltd., the temporary head office of which is at Oakley Manor, Belle Vue, Shrewsbury, Shropshire, announces the following changes in branch office addresses : The company's Birmingham office is removed from Lawley Street to Lansdowne House, 41, Water Street, Birmingham, 3 (Telephone, Birmingham Central 3053). The Bristol office and warehouse are closed temporarily. The London office is removed from Norfolk House to Trafalgar House, Waterloo Place, London, S.W.1 (Telephone, Abbey 1365).

The two railways operating in El Salvador, the International Railways of Central America and the Salvador Railway Co. Ltd., make all their purchases in the United States through Mr. T. F. Ryan, Pier 3, North River, New York, N.Y., for the former, and Carr Brothers Incorporated, 120, Broadway New York, N.Y., for the latter.

Forthcoming Meetings

Mar. 4 (*Tues.*).—**Buffalo & Lake Huron Railway Company** (Ordinary half-yearly), India Buildings, Water Street, Liverpool, at noon.

Mar. 7 (*Fri.*).—**Great Southern Railways Company.** (Ordinary general) Gresham Hotel, Upper O'Connell Street, Dublin, at 2 p.m.

Mar. 7 (*Fri.*).—**London Midland & Scottish Railway Company** (Ordinary general), Friends House, Euston Road, London, N.W., at 11.30 a.m.

Mar. 7 (*Fri.*).—**London & North Eastern Railway Company** (Ordinary general). Grosvenor House, Park Lane, W.1, at 2 p.m.

Mar. 12 (*Wed.*).—**Great Western Railway Company** (Annual general), Paddington station, W.2, at 11.30 a.m.

Mar. 12 (*Wed.*).—**Southern Railway Company** (Annual general). Charing Cross Hotel, Strand, W.C., at 11.30 a.m.

Railway Stock Market

Inactive conditions have continued to rule on the Stock Exchange owing to the cautious tendency induced by uncertainty as to the next turn of events in the war and international affairs. Home railway securities were unable to move against the surrounding market trend, and were lower on balance, due mainly to the fact that quotations are ex the recently-declared dividends. The substantial yields obtainable on the junior stocks are regarded as unduly large, although it is realised that it is very difficult to assess their investment merits, pending revision of the financial agreement and special legislation defining the position of the railways and public utility concerns in regard to compensation for war damage. Nevertheless, it would seem that during the period of the war, the railways can be regarded as assured of revenue at the guaranteed minimum level, and that on this basis yields on the junior stocks would still be substantial. Dividend payments for 1940 are, of course, about midway between dividend rates based on the first and second stages of the financial agreement. L.N.E.R. first preference at 36 yields fully 11 per cent., and would appear to be moderately priced in comparison with L.M.S.R. 1923 preference (which at 37 yields approximately 10¾ per cent.) and also shows a larger yield than Southern preferred, the return on which is 10½ per cent. at the current price of 47½. Great Western ordinary yields as much as 12 per cent. at around 33; a yield of no less than 16 per cent. is obtainable on L.N.E.R. second preference, now quoted at 12½, but this reflects the view that it may be prudent to regard the 2 per cent. dividend for 1940 partly as compensation for the disappointing payment of ¾ per cent. made for the previous year.

Financial results for 1940 have tended to draw attention to the investment merits of prior charge stocks of the main-line railways, yields on which must be regarded as attractive. L.N.E.R. 4 per cent. second guaranteed at 65 yields nearly 6½ per cent.; and as in the case of other prior charge stocks (with the exception of the debentures) the current price is well below that ruling a year ago. L.N.E.R. second guaranteed was then 73½, and moreover the first guaranteed, which is now 78, was then quoted at 83½. As compared with a year ago, L.M.S.R. guaranteed shows a loss of a few points only, but Southern 5 per cent. preference is considerably lower on the year at 83½, compared with 103½. Great Western 5 per cent. preference is now 87½, which compares with 101½ a year ago. Yields on Great Western and Southern 5 per cent. preference are both around 5½ per cent., which is a generous return, but in comparison, L.N.E.R. second guaranteed, which as mentioned above, yields nearly 6½ per cent., would appear to be undervalued. Sentiment as to prior charge stocks as well as junior securities, of course, is affected by uncertainty arising from future revision of the financial agreement. Nevertheless, the railways can expect equitable treatment, and presumably the maintenance of guaranteed minimum revenue, on which basis the dividend requirements of the above-mentioned stocks would remain well covered.

Foreign railway securities have been inactive, and where changed, movements, although small, were adverse to holders. B.A. Gt. Southern 4 per cent. debentures were 41; B.A. & Pacific 4½ per cent. debentures 24; and B.A. Western 4 per cent. debentures 35. Antofagasta 4 per cent. debentures transferred at 52½, and the preference stock changed hands up to 19. French railway sterling bonds tended to attract a little speculative attention at slightly better prices. Indian railway stocks continued to experience some demand. Canadian Pacific issues were inclined to ease.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

	Railways	Miles open 1940–41	Week Ending	Traffic for Week: Total this year	Traffic for Week: Inc. or Dec. compared with 1932	No. of Weeks	Aggregate Traffics to Date: Totals: This Year	Aggregate Traffics to Date: Totals: Last Year	Aggregate Traffics to Date: Increase or Decrease	Shares or Stock	Prices: Highest 1940	Prices: Lowest 1940	Prices: Feb. 25, 1941	Yield % (See Note)
				£	£		£	£	£					
South & Central America	Antofagasta (Chili) & Bolivia	834	16.2.41	17,150	– 6,580	7	118,770	129,700	– 10,930	Ord. Stk.	11½	3½	4	Nil
	Argentine North Eastern	753	15.2.41	ps. 114,500	– ps.17,200	33	ps. 4,989,300	ps. 5,133,600	– ps.144,300	,,	3¾	1	2	Nil
	Bolivar	174	Jan. 1941	3,200	– 500	4	3,200	3,700	– 500	6 p.c. Deb.	6½	5	6½	Nil
	Brazil	—	—	—	—	—	—	—	—	Bonds	8	5	6	Nil
	Buenos Ayres & Pacific	2,801	15.2.41	ps.1,902,000	+ps. 32,000	33	ps.42,400,000	ps. 43,193,000	– ps.793,000	Ord. Stk.	4½	1	1¾	Nil
	Buenos Aires Central	190	14.12.40	$70,000	– $6,000	24	$2,141,800	$2,564,000	– $422,200	—	—	—	—	—
	Buenos Ayres Great Southern	5,082	15.2.41	ps.2,757,000	– ps.433,000	33	ps.68,526,000	ps. 75,390,000	– ps.6,864,000	Ord. Stk.	10⅜	3	3¾	Nil
	Buenos Ayres Western	1,930	15.2.41	ps. 964,000	+ps. 34,000	33	ps.23,468,000	ps. 25,590,000	– ps. 2,122,000	,,	5⅜	2	3	Nil
	Central Argentine	3,700	15.2.41	ps.2,015,200	+ps.320,600	33	ps.48,101,450	ps. 59,196,500	– ps11,095,050	,,	8¼	2	2½	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	4	¼	1¼	Nil
	Cent. Uruguay of M. Video	972	15.2.41	23,960	– 3,813	33	709,641	674,290	+ 35,351	Ord. Stk.	3¾	¼	1½	Nil
	Costa Rica	188	May 1940	17,282	– 7,020	48	193,339	245,516	– 52,177	Stk.	23½	14	15½	12⅞
	Dorada	70	Jan. 1941	12,200	—	4	12,200	12,200	—	1 Mt. Db.	99	97½	98	6⅛
	Entre Rios	810	15.2.41	ps. 206,200	– ps. 18,300	33	ps. 7,178,400	ps. 8,180,800	– ps.1,002,400	Ord. Stk.	4	¼	1¼	Nil
	Great Western of Brazil	1,016	15.2.41	12,800	– 1,900	7	81,900	95,200	– 13,300	Ord. Sh.	4/-	1/-	2/6	Nil
	International of Cl. Amer.	794	Sept. 1940	$325,789	– $37,196	39	$4,405,419	$4,486,381	– $80,962	—	—	—	—	—
	Interoceanic of Mexico	—	—	—	—	—	—	—	—	1st Pref.	9d.	9d.	½	Nil
	La Guaira & Caracas	22¾	Jan. 1941	6,125	– 1,485	4	6,125	7,610	– 1,485	—	6	4	—	—
	Leopoldina	1,918	15.2.41	26,463	+ 1,783	7	160,278	154,488	+ 5,790	Ord. Stk.	2⅝	½	¾	Nil
	Mexican	483	7.1.41	ps. 261,000	+ps. 11,700	1	ps. 261,000	ps. 249,300	+ps. 11,700	,,	2/11½	2/6	½	Nil
	Midland of Uruguay	319	Dec. 1940	12,398	+ 1,938	26	69,025	55,678	+ 13 347	—	—	—	—	—
	Nitrate	386	15.2.41	3,036	– 7,500	7	13,288	29,205	– 15,917	Ord. S h.	2¾	1½	2	6½
	Paraguay Central	274	15.2.41	$2,752,000	– $287,000	33	$108,539,000	$105,900,000	+ $2,639,000	Pr. Li. Stk.	41	36	30½	19⅛
	Peruvian Corporation	1,059	Jan. 1941	67.820	– 13,235	30	461,145	464,990	– 3.845	Pref.	4	1	1¾	Nil
	Salvador	100	21.12.40	£25,750	+ £3,170	25	£252,021	£296,854	– £44,833	—	—	—	—	—
	San Paulo	153½	9.2.41	35,000	+ 1,873	6	212,625	199,301	+ 13,324	Ord. Stk.	50	23	27½	9⅛
	Taltal	160	Jan. 1941	2.295	– 1.365	31	19,435	17,800	+ 1,635	Ord. Sh.	15/1½	3/8	4/4	9¼
	United of Havana	1,353	15.2.41	37,298	– 1,814	33	550,610	608,011	– 57,401	Ord. Stk.	⅜	¼	⅜	Nil
	Uruguay Northern	73	Dec. 1940	1,442	– 10	26	7,013	6,261	+ 752	—	—	—	—	—
Canada	Canadian National	23,637	14.2.41	976,904	+ 105,759	6	6,143,302	5,265,351	+ 877,951	—	—	—	—	—
	Canadian Northern	—	—	—	—	—	—	—	— 4 p.c.	Perp. Dbs.	86	68	89	4½
	Grand Trunk	—	—	—	—	—	—	—	—	4 p.c. Gar.	105¾	95⅛	102½	3⅞
	Canadian Pacific	17,153	14.2.41	694,800	+ 102,000	6	4,302,400	3,667,200	+ 635,200	Ord. Stk.	9⅜	4⅜	7¼	Nil
India†	Assam Bengal	1,329	30.4.40	45,187	+ 6,529	4	135,060	120,437	+ 14,623	Ord. Stk.	99⅜	71	99	3
	Barsi Light	202	31.12.40	4,957	+ 442	39	119,880	96,953	+ 22,927	—	—	—	—	—
	Bengal & North Western	2,086	31.1.41	267,075	+ 5,891	18	999,900	922,519	+ 77,381	Ord. Stk.	283	234	294	5⅛
	Bengal Dooars & Extension	161	Sept. 1940	14,625	+ 508	26	78,405	66,243	+ 12,162	,,	218½	195	225	5½
	Bengal-Nagpur	3,269	30.11.40	257,850	+ 24,432	34	5,714,628	5,151,941	+ 562,687	,,	96	83⅞	98½	4⅛
	Bombay, Baroda & Cl. India	2,986	10.2.41	319,240	+ 62,100	47	8,731,725	7,752,525	+ 979,200	,,	108	99	107½	5⅛
	Madras & Southern Mahratta	2,967	20.12.40	181,125	+ 4,631	38	4,325,984	4,074,879	+ 251,105	,,	104	97⅞	103½	7½
	Rohilkund & Kumaon	571	31.1.41	64,275	+ 7,129	18	208,350	192,796	+ 15,554	,,	284	238	285	5⅝
	South Indian	2,542	10.12 40	115,062	– 40	36	3,144,710	2,821,965	+ 322,745	,,	93¾	83	92½	5⅝
Various	Beira	204	Dec. 1940	63,037	—	13	208,505	—	—	—	—	—	—	—
	Egyptian Delta	623	10.12.40	11,361	+ 1,490	36	159,629	148,603	+ 11,026	Prf. Sh.	7/10½	⅞	⅞	Nil
	Kenya & Uganda	1,625	—	—	—	—	—	—	—	—	—	—	—	—
	Manila	—	—	—	—	—	—	—	—	B. Deb.	53	44½	47½	7⅜
	Midland of W. Australia	277	Nov. 1940	15.716	+ 4,027	22	78,885	63,495	+ 15,390	Inc. Deb.	88	80	87½	6⅛
	Nigerian	1,900	30.11.40	65,370	+ 15,784	35	1,314,395	1,120,441	+ 193,954	—	—	—	—	—
	Rhodesia	2,442	Dec. 1940	460,036	—	13	1,436,259	—	—	—	—	—	—	—
	South Africa	13,287	11.1.41	720,662	+ 42,707	41	28,296,535	26,466,735	+ 1,829,800	—	—	—	—	—
	Victoria	4,774	Aug. 1940	888,289	+ 190,022	9	1,756,717	1,383,157	+ 373,560	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ⅛ Argentine traffics are now given in pesos
† Receipts are calculated @ 1s. 6d. to the rupee